



1. The Flowering Rush - The Lily of the Valley - Solomon's Seal.
2. Red. Parrot's Beak - Butcher's Broom.

BRITISH WILD FLOWERS.

BY

MRS. LOUDON.

“ Ye Field Flowers ! the gardens eclipse you, 'tis true,
Yet, wildlings of Nature, I doat upon you,
For ye waft me to summers of old,
When the earth teemed around me with fairy delight,
And when daisies and buttercups gladdened my sight,
Like treasures of silver and gold.”

CAMPBELL.

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BRITISH WILD FLOWERS.

INTRODUCTION.

THE present work has been undertaken in consequence of its being suggested to me that a selection of British Wild Flowers, in one volume, on the same plan as my *Ladies' Flower Garden*, would be useful to those who have neither time nor opportunity to consult the larger works on the subject. In order to confine myself within the necessary limits, I shall take only the most ornamental plants, and I shall not figure any flowers that are common in gardens. My object is to enable any amateur who may find a pretty flower growing wild to ascertain its name and some particulars respecting it; and, in addition to these details, I have ventured to add a few remarks on the botanical construction of most of the plants, in the hope of inducing such of my readers as may be unacquainted with botany to study a charming science, which has hitherto been too much neglected. I must confess nothing would give me more pleasure than to see botany commonly taught in girls' schools, as French and music are at present; and I think it more than probable that in another generation it will be so—as, though the Linnæan system was unfit for females, there is nothing objectionable in the Natural Arrangement; and the prejudice against botanical names is every day declining, from the number of beautiful plants exhibited at Flower Shows which have no English appellations.

The naming of the trees in Hyde Park and Kensington Gardens, and the establishment of so many new Botanic Gardens, particularly the beautiful one in the Regent's Park, in addition to the very great improvement in that at Kew, under the able superintendence of Sir W. J. Hooker, must also have great influence in familiarising persons with botanic names; and I sincerely

hope the time may arrive, though probably I shall not live to see it, when a knowledge of botany will be considered indispensable to every well-educated person.

In the systematic arrangement of the plants contained in the present work, I have followed Dr. Lindley's *Synopsis of the British Flora*, a most excellent and useful book, which no botanical student should be without; and though I have omitted several genera, it has only been those which either do not contain any ornamental plants, or only include such plants as are very rarely to be met with growing wild in Great Britain. As, however, some persons may wish to become acquainted with these, and all the other plants that I have omitted, it may be useful to refer them to the new edition of Sowerby's *English Botany*, which contains the whole of the British Flora, and the plates in which are so accurately delineated as to be easily recognised, even by a common observer.

In the Botanical part of the following pages, I have adhered principally to the Natural Arrangement, as that is the system now generally preferred by the best botanists, both in Great Britain and on the Continent; but, as some excellent books, particularly Sowerby's *English Botany*, are still arranged according to the Linnæan System, I have added the Linnæan class and order to each genus, with a few words explanatory of the terms as they occur. I have done this because I often felt the want of some explanation of the Linnæan System myself, when I began to study Botany, having learnt the Natural System first.

I have now only to add, that I earnestly recommend every person who wishes to become acquainted with Botany to pay as frequent visits to a Botanic Garden as possible, in order to become familiar with the general appearance of the plants; as this will not only give additional interest to the study, but will very greatly facilitate the progress of the student.

J. W. L.

BAYSWATER.

DSI

BRITISH WILD FLOWERS.

CHAPTER I.

THE CROW-FOOT FAMILY. (RANUNCULACEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Sepals from 3-6, sometimes confounded with the petals. Petals 5-15, hypogynous, distinct, occasionally deformed, and sometimes wanting. Stamens indefinite, hypogynous, anthers usually turned outwards. Carpels numerous, seated on a torus, one-celled or partially united into a single many-celled pistil; one or more seeded. Fruit either consisting of dry akenia, or berries

with one or more seeds, or follicles, or capsules. Seeds albuminous. Embryo minute. Albumen corneous. Herbs, or very rarely shrubs. Leaves alternate or opposite, generally divided, with the petiole dilated and forming a sheath half clasping the stem. Inflorescence variable. —(Lindley.)

DESCRIPTION, &c.—The Crow-foot family is now generally placed by botanists at the commencement of the Natural System, but it is rather unfortunate that it is so, as it is one of the most difficult orders that a student can begin with. The plants belonging to most of the other Natural families may be recognised by the resemblance which their flowers bear to each other; but the flowers of the Crow-foot family are so variable as to form no clue to their relationship. What, for instance, can be more dissimilar than the flowers of the common Crow-foot and those of the Larkspur; and who can find any resemblance between the Columbine and the Peony or the Marsh Marigold? Why then, the student may naturally ask, are all these plants classed together? The resemblance lies principally in the construction of the flowers and the seed vessels, which it requires some knowledge of Botany to distinguish in the plants while in flower; though when the flowers have fallen, the resemblance in the seed-vessels becomes more apparent. In all the Ranunculaceæ the seed-vessels consist of a number of carpels, placed very close to each other, and sometimes growing together, on a fleshy substance called a torus, which is attached to the end of the flower-stalk. These seed-vessels are very numerous in the common Crow-foot and the Pheasant's Eye, in which plants they contain only one seed each; but in the Larkspur and Columbine they are fewer in number, and larger, each containing several seeds; and in the Clematis and Pasque flower they are furnished with long feathery tails. The construction, however, is the same in all. All the plants belonging to the order have also numerous stamens, which grow from *below* the carpels, being inserted in the torus. The petals of the flower are also inserted in the torus, and are so distinct from the stamens, that children sometimes amuse themselves by pulling off the bright yellow petals of the butter-cup, and then showing the flowers (which, in their denuded state, seem all stamens) to their companions to guess what they can be. The seeds of the Ranunculaceæ present another mark of distinction. All perfect seeds contain an embryo, which is the germ of a new plant; and this generally occupies only a portion of the seed, the rest being filled up with a substance called the albumen, which serves for the nourishment of the young plant till its roots and leaves are developed, as the yolk and white of the egg serve to nourish the chicken they enclose. The albumen differs very much in different seeds, sometimes it is floury, as in wheat; and at others horny, as in

coffee: sometimes it is very abundant, sometimes there is very little of it, and sometimes none at all. Now, in the seeds of all the Ranunculaceæ, the embryo is very small, and it is placed at the point of the seed with a mass of horny albumen above it.

These particulars require, however, such a minute examination of the plants as not to be generally useful; and a more popular way of judging is to notice the leaves, which in most of the Ranunculaceæ are very much cut; though this is by no means a certain criterion, for some of the plants have entire leaves, as in the two Spear-worts, and the Grass-leaved Crow-foot. Nearly all the species, however, have the foot-stalks of their leaves sheathing the stem; so that this is a decided characteristic. Another characteristic is the acrid, watery juice which all the plants belonging to this order give out when bruised, and which clearly distinguishes them from the poppy tribe, which some of them greatly resemble, but all of which have a milky juice. Nearly all the British species of Ranunculaceæ are herbaceous plants—the only shrub being the common Clematis or Traveller's Joy; and nearly all the species prefer a moist, marshy soil. Botanists divide the Ranunculaceæ into the genuine and the spurious, of which they make two sections.

SECT. I. *Genuine Ranunculaceæ.*

GENUS I.

THE CLEMATIS, OR VIRGINS' BOWER. (CLÉMATIS, *Lin.*)

Lyn. Syst. POLYANDRIA POLYGYNIA.

GENERIC CHARACTER.—Involucrum none, or shaped like a calyx or shorter than the sepals. Akenia numerous, terminating in a immediately beneath the flower. Sepals 4-8, coloured. Petals none, bearded tail. Roots perennial. Leaves exactly opposite. (Dec.)

DESCRIPTION, &c.—It has been already observed that the flowers of the Crow-foot family are very irregular in their forms. Some of them, like the common Crow-foot, have a green calyx, and a bright coloured corolla; others, as the Larkspur and the Columbine, have the calyx and corolla of the same colour, and so mixed together as to be scarcely distinguishable; and others have no corolla—what botanists call a coloured calyx supplying its place. Of this last kind is the Clematis, as it has only a coloured calyx inclosing its stamens, without any petals. Notwithstanding the number of species of this genus which adorn our gardens; there is only one kind that is a native of Britain, and that is known by the somewhat poetical name of the Traveller's Joy. It is generally called a shrub, but none of the species of Clematis are true shrubs; they are only what is called suffruticose; that is, the young wood is herbaceous, though the stems of the old wood are woody, particularly near the ground. According to the Linnæan system, the Clematis is included in the class Polyandria, that word signifying numerous stamens, and the order Polygynia, which signifies having many carpels. The student will thus perceive that all the Crow-foot tribe are included in the Linnæan class Polyandria, since they have all many stamens; but they are arranged in different orders according to the number of their carpels.

1.—THE TRAVELLER'S JOY. (CLEMATIS VITALBA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 612, 2nd edit., t. 776; and our *fig. 1.*, in Pl. I.

SPECIFIC CHARACTER.—Stem climbing; leaves pinnate; leaflets

oval, heart-shaped, lobed, and slightly cut: petioles climbing, permanent; panicles forked, scarcely longer than the leaves. (Smith.)

DESCRIPTION, &c.—The flowers of the Traveller's Joy are small, and not remarkable for their beauty; but there is a graceful lightness about them that gives them a very elegant appearance. The stems are more woody than those of any other kind of Clematis, and they often grow to the height of twenty feet; pushing their way



1. Traveller's Joy. 2. Meadow Rue (the lesser). 3. Pheasant's eye.



through the branches of trees, or the bushes of hedge-rows, so as always to have the flowers and leaves of the plants fully exposed to the sun and air. The tendrils of the leaves twist round every object that presents itself to them; and, as they afterwards become hard, and do not fall with the blades of the leaves, they form a kind of hook, by which the Clematis attaches itself to the neighbouring trees, from which it hangs down in graceful festoons. The flowers are of a greenish-white, and, though sweet-scented, their fragrance is oppressive rather than agreeable; but the plant is more handsome in seed than in flower, the long feathery tails of the carpels forming beautiful tufts, which wave like plumes of feathers over the bushes to which they are attached, and have a silvery appearance in the sun. The word Clematis is derived from the Greek, and signifies the tendril of a vine, or other climbing plant; and Vitalba signifies a white vine, a name which is probably given to the species from the silvery appearance of the carpels in autumn. In some parts of England the plant is called the Old Man's Beard, for the same reason; and Gerard gave it the name of Traveller's Joy, from its adorning the ways and hedge-sides along which people travel. The French call it *Herbe aux Gueux*, or Beggars' Grass, because the beggars in France are said to use it to excite pity for them, as they make ulcers with it on their arms and legs, by inflicting a slight scratch, and then binding a leaf of this Clematis on the place, when its acridity corrodes the flesh, and soon makes an ulcerated wound. The Traveller's Joy is generally found on chalky or calcareous soils, in the South of England; and, in the neighbourhood of London, it is particularly abundant in the chalk pits near Greenhithe, where it is very ornamental. It will grow, however, in almost any soil where it is planted, and in all shows the same luxuriance.

“The Traveller's Joy is a darling thing,
None loveth it more than I :
I 've seen it in courtly gardens cling ;
I 've seen it 'mid rocks and ruins spring ;
I know hedge-rows where it 's wandering—
And I smile as I pass it by.”—TWAMLEY.

When, however, this plant is grown in gardens or shrubberies, it is propagated by seeds, which often remain eighteen months in the soil before they germinate. The stems of the plants become hollow when old, and the shepherds in Germany often cut pieces of them, which they light at one end, and smoke like pipes, the acridity of the plant giving the wood a flavour like that of tobacco. The French gardeners sometimes make baskets, and even bee-hives, of the twigs of this plant; but it is necessary to hold them to the fire, to increase their flexibility, before doing so. This plant is a great favourite in the Cemeteries near London, and there are few graves decorated with flowers that do not possess a plant of it. It is, indeed, well deserving of general cultivation, from the great rapidity with which it covers bowers and arbours, or spreads itself over dead walls; as it soon forms a dense mass, quite sufficient either for shade, or to conceal any unsightly objects. It is also ornamental, both in the summer and autumn, as its flowers appear early in June, and the beauty of its seeds continues till they are prostrated by the frosts of winter. Its fragrance is very powerful, and, though unpleasant in a room, is not disagreeable in the open air.

“ Fair plant ! as plentiful as fair,
Before thou meet'st the eye,
Thy fragrance fills the summer air,
And tells that thou art nigh :
And when the flowers look less bright,
And autumn browns the trees,
Thy feathery seeds shed silvery light,
And quiver in the breeze.”

GENUS II.

THE MEADOW-RUE. (THALICTRUM, *Lin.*)*Lin. Syst. POLYANDRIA POLYGYNIA.*

GENERIC CHARACTER.—Sepals and petals undistinguishable, caducous. Stamens numerous. Akenia numerous, stalked, and awnless. Embryo very small, with converging cotyledons.

DESCRIPTION, &c.—The plants belonging to this genus are very common, particularly in wet meadows. They have generally stiff, upright, hollow stems; yellow, fleshy roots; compound leaves, and panicled flowers. The flowers themselves are not remarkable for their beauty, as they consist of little else but stamens; but in some of the species they have a light feathery appearance, from their small size and great number. The leaves are always compound, that is, divided into leaflets, and the footstalks sheath the stem at their base. The name of Meadow-Rue has been given to these plants from some slight resemblance that has been fancied between the leaves of one of the species and those of the common garden Rue; but there is no resemblance in the properties of the two plants. *Thalictrum* is from a Greek word signifying to flourish or look green; the leaves of these plants being very abundant, and generally of a deep green, from the moist places in which they grow. This plant, like the Clematis, according to the Linnaean system, belongs to Polyandria Polygynia, from its numerous stamens and carpels. The carpels contain only one seed each, and, when ripe, are called akenia.

1.—THE COMMON MEADOW-RUE. (THALICTRUM FLAVUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 367; 2nd ed., t. 775.

SPECIFIC CHARACTER.—Stem erect, branched, furrowed, leafy;

leaves bipinnate; leaflets broadly obovate, or wedge-shaped, trifid;

panicle compact, sub-corymbose; flowers erect. (*Smith.*)

DESCRIPTION, &c.—This is by far the most coarse-growing and least ornamental of all the species. It is extremely common in the southern and middle districts of England, but it becomes more rare towards the north. It is generally found in Ozier beds or marshy meadows, or growing on the banks of rivulets or ditches, as it appears only to flourish in a wet soil. The stems grow two or three feet high, and are always hollow. The flowers, which are produced in June or July, are erect, and consist almost entirely of large yellow stamens. They are stiff in their habit of growth, and form a large compact panicle. The leaflets vary considerably in form, and they are exceedingly acrid in their properties; so much so, indeed, as to be used by the country people when bruised, to act as a blister. This species is never cultivated in gardens.

2.—THE GREATER MEADOW-RUE. (THALICTRUM MAJUS, *Crantz.*)

ENGRAVINGS.—Eng. Bot., t. 611; 2nd ed., t. 774.

SPECIFIC CHARACTER.—Leaves triply pinnate; leaflets ternate, lobed, glaucous beneath; branches of the panicle aggregate, somewhat

umbellate; flowers drooping; stipulas crescent-shaped, notched.

(*Smith.*)

DESCRIPTION, &c.—This is a much more elegant plant than the last, from its more slender stalks and drooping flowers, and it is common in Scotland and the North of England, while it is extremely rare in the south. In other respects the Greater Meadow-Rue bears considerable resemblance to the common species, though its leaves have less acridity. The seeds, if sown, are a long time before they germinate, as they are of the kind called akenia—that is, the seed vessel, though distinct from the seed, remains on it when the seed is gathered.

3.—THE LESSER MEADOW-RUE. (*THALICTRUM MINUS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 11; 2nd ed., t. 773; and our *fig. 2*, in Pl. 1. three-eleft, glaucous on both sides; flowers panicled, pendulous; stem zigzag; stipulas rounded. (*Smith.*)

SPECIFIC CHARACTER.—Leaves doubly pinnate; leaflets ternate,

DESCRIPTION, &c.—The stem is light and graceful; the leaves are small, and, from their glaucous hue, more like those of the Common Rue than those of any other species of the genus. The flowers are drooping, and have a light feathery appearance. This plant is very common in the chalky and limestone districts of England, growing abundantly on the chalky downs of Sussex and Kent, and in the powdered shells on the sea-shore. In the North of England and Scotland it is always found in dry pastures, on limestone or chalk. This is the only British species that is cultivated in gardens; and, though it is rarely met with in such situations, it is very suitable for the decoration of rock-work.

4.—THE ALPINE MEADOW-RUE. (*THALICTRUM ALPINUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 262; 2nd ed., t. 772.

SPECIFIC CHARACTER.—Stem simple, nearly leafless; racemes simple, terminal; flowers drooping. (*Smith.*)

DESCRIPTION, &c.—This is an elegant little plant, with very small flowers, but pretty roundish leaflets, which are disposed in threes, and are of a deep glossy green. The stem is creeping, and roots beneath the soil, so as to render it very difficult to eradicate the plant when it has once established itself. The species is a native of the mountains of England, Scotland, and Wales, where it generally grows in the fissures of the rocks, or on the margins of the mountain streams.

GENUS III.

THE PHEASANT'S EYE. (*ADONIS, Lin.*)

Lin. Syst. POLYANDRIA POLYGYNIA.

GENERIC CHARACTER.—Calyx of five adpressed sepals. Petals of a torus. Akenia numerous, arranged in a spike, tipped by the 5-15, with a naked claw. Stamens numerous, inserted at the base hardened style. (*Lindley.*)

DESCRIPTION, &c.—There is but one species of this genus found wild in Britain, and it only grows in corn-fields in the southern counties of England. The wild plant flowers much earlier than the *Flos Adonis* of the gardens, as it is generally in full blossom when the wheat and barley among which it grows are only showing their green leaves above ground; and the seeds of the *Adonis* are ripe, and have fallen, long before the grain is ready to be cut. The botanic name of this plant alludes to the fable of its springing from the blood of *Adonis*, when that favourite of *Venus* was gored to death by the tusks of the wild boar. The French call the plant *Goutte de Sang* for the same reason. The English name of Pheasant's Eye alludes to the flower having some resemblance to the red circle round the eye of a pheasant. The botanical student will find no difficulty in knowing where to class this plant, as the resemblance between its flowers and seed-vessels and those of the Crow-foot, is too great to allow of any doubt of its being placed in the Crow-foot tribe; while its numerous stamens and carpels show that, in the Linnæan arrangement, it must belong to *Polyandria Polygynia*.

1.—THE PHEASANT'S EYE. (*ADONIS AESTIVALIS*, *With.*)SYNONYME.—*A. autumnalis*, *Lin.*ENGRAVINGS.—Eng. Bot., t. 308; 2nd cd., t. 781; and our *fig. 3*, in Pl. 1.

SPECIFIC CHARACTER.—Petals about 8, inversely heart-shaped;

fruit ovate; stem branched. (*Smith.*)

DESCRIPTION, &c.—Though this plant is generally considered to be the same as the Flos Adonis of the gardens (*A. autumnalis*), I think it very possible that they may be distinct; and I have therefore adopted the name of Dr. Withering, which signifies the Summer Adonis, in preference to that of Linnaeus. It is true that the Pheasant's Eye may sometimes be found in corn-fields in autumn, but then it is quite late in the season—in October or November. I believe, indeed, that though it is often seen in corn-fields when the corn is green, or growing among the stubble long after the corn has been carried, it has never been found there in flower while the corn is in ear; and, consequently, it is probable that the autumnal flowers are a second crop produced by the seeds of the first. The plant is easily recognised by its finely-cut leaves and solitary flowers, which, in the wild plant, are more decidedly scarlet than those of the Flos Adonis of the gardens, the flowers of which sometimes assume a crimson hue. The wild plant is an annual, like the garden species.

GENUS IV.

THE ANEMONE, OR WINDFLOWER. (*ANEMONE*, *Lin.*)*Lyn. Syst. POLYANDRIA POLYGYNIA.*

GENERIC CHARACTER.—Involucrum of three cut leaves, distant from the flower. Sepals and petals 5-15 in number, coloured, passing gradually into each other, so that they cannot be distinguished. (*Lindley.*)

DESCRIPTION, &c.—All the plants belonging to this genus have beautiful flowers, and cut leaves. They are all dwarf perennials; and though some of them bear considerable resemblance to some of the species of *Ranunculus*, they may be always distinguished by the *Anemone* having the calyx and corolla of the same colour, and so mixed together that one cannot be distinguished from the other; while in all the kinds of *Ranunculus* the calyx and corolla are quite distinct, the calyx being green and the corolla either of a golden yellow or white. The *Anemone* has also a leafy involucre on the flower-stalk, but at some distance below the flower. The *Anemone* is closely allied in botanical construction to the Flos Adonis, as it has numerous stamens and numerous carpels, though the latter are somewhat different in their form and arrangement. *Anemones* are also of two kinds, the seed-vessels of some of them having feathery tails like the *Clematis*; while others are perfectly destitute of such appendages. The name of *Anemone* is from a Greek word signifying the wind, and hence the English name of the plant is Windflower; but what connection the flower has with the wind it seems difficult to explain. Some suppose the name of Windflower was given to these plants from the flowers of the common wood *Anemone* being so lightly hung, as to quiver in every breeze that blows. Others suppose that the name alludes to the plant opening during the windy month of March; and others suppose that the plant only opens when the wind blows.

—“A garland for you intertwin'd
With Violts, Hepaticas, Primroses,
And coy Anemonc, that ne'er uncloses
Her lips, until they're blown on by the wind.”

Smith's Amarynthus.

1.—THE PASQUE-FLOWER. (*ANEMONE PULSATILLA*, *Lin.*)SYNONYME.—*Pulsatilla vernalis*, *Spreng.*

ENGRAVING.—Eng. Bot., t. 51, 2d ed., t. 777.

SPECIFIC CHARACTER.—Leaves doubly pinnate, cut, with linear

lobes. Involucrum in deep linear segments. Flower solitary, nearly erect. Petals six. Awns of the fruit long, feathery. (*Smith.*)

DESCRIPTION, &c.—This plant is probably not a true native of England, though it is found abundantly in the high chalky pastures of the southern districts, where it flowers in April and May. The flowers are of a deep purple, clothed on the outside with long silky hairs, and the carpels have feathery tails. This species is common all over the middle and south of Europe; but it will only grow in an elevated situation, and where it has an abundance of pure air. In the language of flowers, the purple Anemone signifies forsaken.

2.—THE WOOD ANEMONE. (*ANEMONE NEMOROSA*, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 355; 2d ed., t. 778; and our *fig. 1*, in Pl. 2.

SPECIFIC CHARACTER.—Flowers solitary. Petals six, elliptical.

Fruit pointed, without tails. Involucrum of three ternate or quinate, stalked, lobed, and cut leaves. (*Smith.*)

DESCRIPTION, &c.—This is one of the most common of the British flowers, as there is scarcely a wood or thicket in Great Britain, where there is marshy ground, in which it is not to be found. It is only, however, in moist shady situations that it will thrive. The flowers are extremely beautiful, as they are of a snowy white with a delicate purple tinge; as is very elegantly described in the following lines:—

“Nymph of the wood and forest glade!
In thy own fair vestal robes arrayed.
In the calm of the silent sylvan bower,
'Tis sweet to gaze on thy drooping flowers.
Chaste and pure as the driven snow,
Yet faintly tinged with a purple glow.

Like mountain crests,
On some Alpine height,
When the snow-drift rests
In the evening light!”

The Wild Garland.

The Wood Anemone is frequently cultivated in gardens, and sometimes it becomes double, though it is not so pretty as it is in a single state. It has a creeping root, and, when once established, it is very difficult to eradicate it. This plant is one of the early spring-flowers, but it is said that it never comes into blossom before the 16th of March, or later than the 22nd of April. In the woods, these Anemones are the first flowers which seem to triumph over the dead leaves and other vegetable remains which have been left still partially undecayed from the preceding autumn, and to clothe the ground in the gay livery of spring.

— Anemone's weeping flowers,
Dyed in winter's snow and rime,
Constant to their early time,
White the leaf-strewn ground again,
And make each wood a garden glen.
Clare.

In the language of flowers, the Wood Anemone is made to signify sickness, but this seems a strange interpretation to put upon a lovely little flower. In the botanical construction of this flower, it must be observed that the carpels are without the feathery tails which are so conspicuous in *A. pulsatilla*.

OTHER SPECIES OF ANEMONE.

THE BLUE MOUNTAIN ANEMONE. (A. APENNINA, *Lin.*)

This beautiful plant can hardly be called a native of England, as though it is occasionally found growing wild in woods, it has probably only sprung from seeds which have been thrown out with some garden rubbish, or have been carried there by the wind. It has more the appearance of an Aster than an Anemone, as it has from twelve to twenty bright blue petals surrounding a yellow centre; but it is easily distinguished by its involucre, which is at a considerable distance from the flower, and consists of three deeply cut leaves.

THE YELLOW WOOD ANEMONE. (A. RANUNCULOIDES, *Lin.*)

This is a very rare species, having been found in only two places—one in Hertfordshire, and the other in Kent. It very closely resembles the Ficaria, a species of Ranunculus, but is distinguished by the absence of a green calyx, and the presence of an involucre at some distance from the flower.

GENUS V.

THE MOUSE-TAIL. (Myosurus, *Lin.*)

Lin. Syst. PENTANDRIA POLYGYNIA.

DESCRIPTION, &c.—There is only one species in this genus, (*M. minimus*,) a little insignificant plant, with very small flowers. The name of Myosurus is derived from two Greek words signifying Mouse-tail; and this odd name alludes to the shape of the torus on which the seed-vessels are placed, and which is elongated, so as to bear some resemblance to a mouse's tail. There are only five stamens, and hence it is placed in the Linnean class Pentandria.

GENUS VI.

THE CROW-FOOT. (RANUNCULUS, *Lin.*)

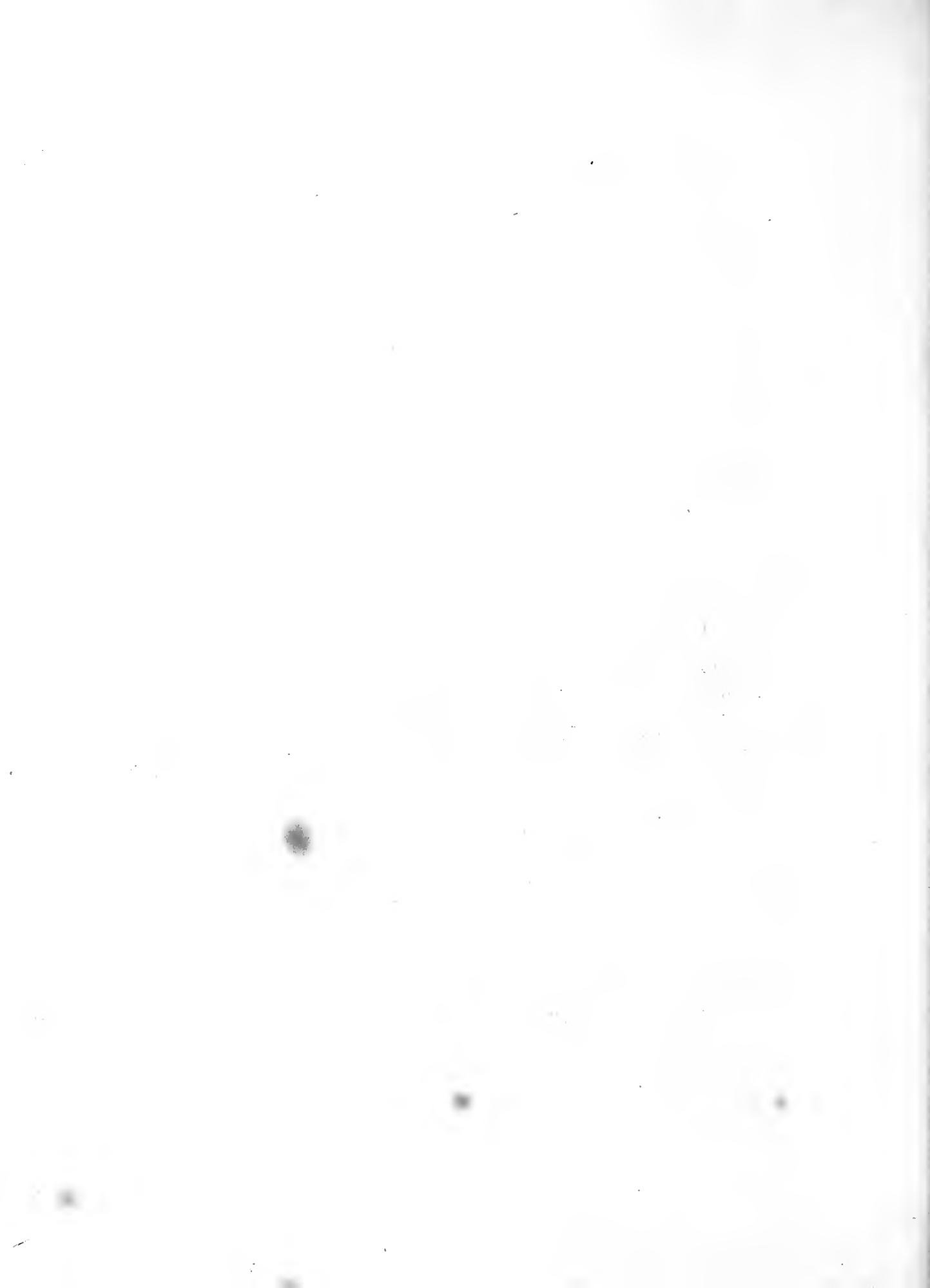
Lin. Syst. POLYANDRIA POLYGYNIA.

GENERIC CHARACTER.—Calyx of five sepals, which are not elongated at the base. Petals 5—10, with a nectariferous scale at the base. Stamens numerous. Cariopsis ovate, somewhat compressed, ending in a short horn or mucro, arranged in a globose or cylindrical head. Roots fascicled. (*Lindley.*)

DESCRIPTION, &c.—The genus Ranunculus is a very extensive one, and it is well known, not only from the numerous species that are natives of Britain, but from the beautiful Asiatic kinds which are so ornamental in our flower-gardens. The British species have generally very showy flowers of a brilliant golden yellow (only two kinds having white flowers), and they are all very common. The word Ranunculus is derived from *rana*, a frog, in allusion to the marshy ground in which most of the species grow, and which is exactly the situation in which frogs are found. The name of Crow-foot relates to the shape of the leaves, which bear some resemblance to a crow's foot. All the species are perennials, and some of them have creeping under-ground stems, or tuberous roots, by which they increase rapidly. The seed-vessels are of the kind called cariopsis, that is, they contain but one seed each, and each carpel is so united to the seed it contains that they cannot be separated.



1. *The Wood-Anemone*. 2. *The Buttercup*. 3. *Water-Crowfoot*



§ 1. *Leaves simple.*1.—THE GREAT SPEAR-WORT. (*RANUNCULUS LINGUA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 100; 2d ed., t. 782.

SPECIFIC CHARACTER.—Leaves lanceolate, pointed, nearly sessile, | slightly serrated; stem erect, many-flowered; root fibrous; fruit smooth. (*Smith.*)

DESCRIPTION, &c.—This species is only met with in ditches and other wet places, where it is easily recognised by its leaves, which are not cut, but long and tongue-shaped. The form of the leaves gives rise to the specific name of “*lingua*,” which signifies a tongue; and also to the English name of Spear-wort. The species is generally said to be rare, but it is by no means so uncommon as is usually supposed, as it is frequently mistaken for the common Butter-cup, which it greatly resembles in its flowers, while, from the situations in which it grows, the leaves are not conspicuous. I have myself frequently seen what appeared to me a very fine specimen of the common Butter-cup, which, on examination, I found to be the Spear-wort, particularly on sandy soils.

2.—THE LESSER SPEAR-WORT. (*RANUNCULUS FLAMMULA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 387; 2d ed., t. 783.

SPECIFIC CHARACTER.—Leaves ovate-lanceolate, blunish, stalked; stem reclining; roots fibrous; fruit smooth. (*Smith.*)

DESCRIPTION, &c.—This species is very common, but the flowers are small, and the leaves much shorter than in the preceding plant. There is a variety of this species with a creeping under-ground stem, which is common on some of the Scottish hills; but neither of them possess any beauty. The distilled water of this plant is sometimes used by the country people as an emetic, and Dr. Withering tells us that it acts instantaneously, without injuring the stomach so much as some other medicines used for the same purpose.

3.—THE FICARIA, OR LESSER CELANDINE. (*RANUNCULUS FICARIA*, *Lin.*)SYNONYMES.—*Ficaria verna*, *Huds.*; *F. ranunculoides*, *Dec.*

ENGRAVINGS.—Eng. Bot., t. 584; 2d ed., t. 785.

SPECIFIC CHARACTER.—Leaves heart-shaped, angular, stalked, smooth; petals numerous, elliptic-oblong. (*Smith.*)

DESCRIPTION, &c.—This species, which is very common in every part of Britain where there are groves or thickets, is easily distinguished from all the other kinds of *Ranunculus* by its numerous star-like petals, and its heart-shaped leaves. The difference in the number and shape of the petals is so conspicuous, that it has been thought sufficient by De Candolle to make of it another genus, under the name of *Ficaria*. The roots of this plant are very remarkable; they are tuberous, and are produced in little bunches. Some have compared them to very small figs, and hence the plant is called *Ficaria*, or Fig-wort; but others think them more like grains of wheat: and, as they lie very near the surface of the ground, and are easily laid bare by a heavy shower of rain, they are supposed to have given rise to the stories sometimes told of showers of wheat having fallen, and having been seen by the country people in woods and thickets. This little plant appears to have been always a favourite of the poets, particularly of Wordsworth, who has celebrated it in some well-known verses:

“Pansies, Lilies, Kingcups, Daisies,
Let them live upon their praises;
There’s a flower that shall be mine,
‘Tis the little Celandine!
Ere a leaf is on a bush,
In the time before the thrush
Has a thought about its nest,
Thou wilt come with half a call,
Spreading out thy glossy breast,
Like a careless prodigal :

Telling tales about the sun,
When we’ve little warmth or none.
Careless of thy neighbourhood,
Thou dost show thy pleasant face;
On the moor, and in the wood,
In the lane—there’s not a place,
Howsoever mean it be,
But ‘tis good enough for thee.”

The following verses on the same plant, and said to be by the same poet, are not so generally known :—

“ There is a flower, the lesser Celandine,
That shrinks, like many more, from cold and rain ;
But the first moment that the sun may shine,
Bright as the sun himself is out again ! ”

“ When hailstones have been falling, swarm on swarm,
Or blasts the green fields and the trees distrest,
Oft have I seen it muffled up from harm,
In close self-shelter, like a thing at rest.”

It does not appear that the *Ficaria* has ever been cultivated in gardens, though many flowers of less beauty have been so. This plant is frequently called the Pile-wort, from its ancient use in medicine, and sometimes Small-wort, probably from its dwarf stature.

§ 2. *Leaves lobed or cut.*

4.—THE UPRIGHT MEADOW CROW-FOOT, OR TALL BUTTER-CUP. (*RANUNCULUS ACRIS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 652 ; 2d ed., t. 789 ; and our *fig. 2*, even ; leaves in three deep lobed and cut segments ; those of the uppermost linear and entire ; stem erect, covered with close hairs.

SPECIFIC CHARACTER.—Calyx spreading ; flower-stalks round and (Smith.)

DESCRIPTION, &c.—This species is supposed to be the common Butter-cup, or King-cup, of the meadows ; though some persons assert that *R. bulbosus* is the Butter-cup, and that this ought to be called only King-cup, from its lofty stature. It is extremely common in rich meadows ; and, as the cows fed in such meadows are most likely to produce abundance of butter, this circumstance, combined with the rich yellow of the flowers of the plant, no doubt gave rise to the idea that the cows ate it, and that it made their butter yellow. This, however, is so far from being the case, that it is now well known that cows will not touch the Butter-cup, and that, in fields where cows have been kept, the stalks of this plant are generally left standing untouched, while the grass is eaten close all round them. The plant is, indeed, so acrid, that no cow could eat it without blistering her lips. The flowers of this plant, though showy, are too glaring to be general favourites. Wordsworth calls them—

“ Butter-cups, that will be seen,
Whether we will see or no ; ”

and the older writers on flowers made them the emblem of Jealousy, though, in the modern books on flowers, they are said to signify Ingratitude. The flowers of this species become double when cultivated ; and are the yellow Bachelor's Buttons of our gardens.

5.—THE BULBOUS CROW-FOOT, OR COMMON BUTTER-CUP. (*R. BULBOSUS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 515 ; and 2d edit., t. 791. stem upright, many-flowered ; leaves compound ; root bulbous ; fruit
SPECIFIC CHARACTER.—Calyx reflexed ; flower-stalks furrowed ; smooth. (Smith.)

DESCRIPTION, &c.—This species, which is said by many persons to be the true Butter-cup, differs considerably from *A. acris*, and can easily be distinguished from that plant, even without seeing its bulbous root, as the calyx is reflexed, and the flower-stalks furrowed ; whereas, in *R. acris*, the calyx is spreading, and the flower-stalks smooth. This species is extremely common everywhere, particularly in meadows that are rather damp ; and it is in some places called St. Anthony's Turnip, from the turnip-like protuberance at the base of its stem. This bulb has a pungent taste, like a radish, and is not poisonous when taken in small quantities. It is often eaten by children, who like its sharp biting taste ; and pheasants are so fond of it, that I have seen several

taken from the crop of a moderate-sized bird. The plant is much smaller in all its parts than *R. acris*, and flowers much earlier in spring. Miss Agnes Strickland evidently alludes to it in the following lines :—

“ Welcome little Butter-cups !
Oh ye pretty flowers,
Coming ere the summer time
To tell of sunny hours. ”

“ While the trees are leafless,
While the fields are bare,
Golden glossy Butter-cups
Spring up here and there.”

6.—THE CELERY-LEAVED CROW-FOOT. (*R. SCeleratus*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 681 ; 2d edit., t. 787.

SPECIFIC CHARACTER.—Stem erect, hollow, much branched ; leaves | smooth, lower ones palmate, upper ones fingered ; fruit oblong,

very numerous, minute. (*Smith.*)

DESCRIPTION, &c.—This is the most poisonous of all the kinds, and it has been known to blister the hands of children who have gathered it, and carried it to any distance in warm weather. The Latin name signifies most wicked, in allusion to its caustic properties. It has, luckily, no beauty to recommend it, as its flowers are very small, and of a dingy yellow. It is used by beggars in England for the same purpose as the Clematis is in France ; that is, to produce the appearance of an ulcer from a slight wound. These practices were very common formerly ; but they are gradually disappearing as the world is becoming more enlightened, and the people well-informed.

7.—THE CREEPING CROW-FOOT. (*Ranunculus repens*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 516 ; 2d ed., t. 790.

SPECIFIC CHARACTER.—Calyx spreading ; flower-stalks furrowed ; shoots creeping ; leaves compound, cut, the uppermost entire. (*Lindley.*)

DESCRIPTION, &c.—This species is one of the most common of all the kinds of Crow-foot, and it is also the most troublesome weed in the whole genus. It is very common in moist meadows throughout the whole country ; and, as its creeping stems send forth shoots at every joint, it soon takes possession of the ground, to the destruction of the grass, or other crop, in the field. This plant varies very much in different situations. In moist ground it will grow three or four feet high, with a stem an inch or more in diameter ; but in dry, gravelly soils it only creeps along the ground, and its stem is not thicker than a straw. It is, however, always recognised by its creeping stem, which it never loses, even in a state of cultivation.

8.—THE CORN CROW-FOOT, OR HUNGER-WEED. (*Ranunculus arvensis*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 135 ; 2d ed., t. 793.

SPECIFIC CHARACTER.—Fruit very prickly at the sides ; leaves once | or twice deeply three-eleted, with linear-lanceolate segments ; stem

erect, much branched, many-flowered. (*Smith.*)

DESCRIPTION, &c.—This is an annual plant, very common in corn-fields, particularly in gravelly soils. The leaves are of a pale yellowish-green, and the flowers very small. The seed-vessels are, however, remarkable from their being covered with strong prominent prickles, which are sometimes hooked. The plant is extremely acrid, and it is more dangerous than most of the other species, as cows, horses, and sheep all eat it greedily. Fortunately, it generally grows in corn-fields, where cattle are not likely to be found ; but it is very dangerous, and ought to be guarded against, when any animal is put into the stubble. When it has been eaten, it occasions violent pain and convulsions, which in some cases are followed by death—the remedy is vinegar.

9.—THE WOOD CROW-FOOT, OR GOLDILOCKS. (*R. AURICOMUS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 624; 2d edit., t. 788.

SPECIFIC CHARACTER.—Radical leaves kidney-shaped, deeply three-

cleft, notched; stem-leaves divided to the base into linear segments; stem many-flowered; calyx coloured. (*Smith.*)

DESCRIPTION, &c.—This species has the root-leaves kidney-shaped, while those of the stem are cut to the base into very slender segments; the shape of the two kinds being so very different, that no one could suppose, on seeing them detached, that they belonged to the same plant. The flowers are rather small, and the petals have no scale at the base. The plant, also, is not acrid, and hence it is sometimes called the sweet Crow-foot. It is very common in the North of England and Scotland, but it is rarely seen in the neighbourhood of London. The name of Goldilocks, which is given to this plant, is not, however, peculiar to it; as, in the midland districts of England, the beautiful Hair Moss (*Polytrichum commune*) bears the same appellation, and certainly is much better entitled to it, as, in autumn, it hangs down like rich tresses of golden hair.

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THE WHITE ALPINE CROW-FOOT. (*R. ALPESTRIS, Lin.*)

This species is very rarely found in Great Britain, though it is common on the Austrian Alps, where it appears immediately on the melting of the snow. The flowers are white, and very pretty.

There are several other British species of *Ranunculus* belonging to this division, but they are not sufficiently ornamental to require a further notice.

§ 3. *Aquatic species.*10.—THE WATER CROW-FOOT. (*RANUNCULUS AQUATILIS, Lin.*)ENGRAVINGS.—Eng. Bot., t. 101; 2d ed., t. 795; and our *fig. 3*, in Pl. 2.

SPECIFIC CHARACTER.—Stem floating; leaves in capillary segments

under water, above water three-parted, with eunciform lobes toothed at the end; petals obovate, larger than the calyx; fruit hispid, with rigid bristles. (*Dec.*)

DESCRIPTION, &c.—This is a most beautiful plant, and, in the month of May, the ponds and other pieces of still water on which it grows appear to be covered with a mantle of silver. The leaves are very curious; those that are below water being cut into very fine segments, while those above water are broad and entire, so that they may float on the surface. Sometimes when the plants grow close together, and in shallow water, the leaves are cut into moderately broad lobes, and are all alike. It generally happens that the poisonous properties of plants are increased by their growing in or near water, but that is not the case with this *Ranunculus*, as it is more wholesome than any of the other species of the genus; and it is eaten in large quantities by the cattle at Ringwood, in Dorsetshire, and other places.

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11.—THE IVY-LEAVED CROW-FOOT. (*RANUNCULUS HEDERACEUS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 2003; 2d edit., t. 796.

SPECIFIC CHARACTER.—Fruit wrinkled. Leaves roundish, kidney-

shaped, with three or five lobes, entire, smooth. Stem creeping.

(*Smith.*)

DESCRIPTION, &c.—This is a very curious little plant, with a creeping stem: leaves like those of the Ivy-leaved Geranium; and very small white flowers. It is generally found in moist places, or very shallow pools, lying on the surface of the ground, or the water.

GENUS VII.

THE GLOBE-FLOWER. (*TROLLIUS, Lin.*)*Lin. Syst. POLYANDRIA POLYGYNIA.*

GENERIC CHARACTER.—Calyx coloured of 5—10—15 sepals, which are deciduous and petaloid. Petals 5—10 small, tubular at the base, one-lipped. Stamens and ovaries numerous, sessile, sub-cylindrical, many-seeded. Upright herbaceous plants, with palmate multifid leaves, and fascicled roots. (Dec.)

DESCRIPTION, &c.—There is only one species of this genus, the common Globe-Flower, which takes its name from its globe-like form; the flowers scarcely ever opening sufficiently to show the stamens. The name of *Trollius* is said to be derived from an old German word, signifying a ball.

1.—THE COMMON GLOBE-FLOWER, OR LUCKEN-GOWAN. (*TROLLIUS EUROPAEUS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 28; 2nd edit., t. 797; and our *fig. 1*, in Pl. 3.

SPECIFIC CHARACTER.—Stamens about 15, concave, converging. Petals nearly as long as the stamens.

DESCRIPTION, &c.—This plant is very abundant in the North of England, particularly in the mountainous districts of Westmoreland, and in Scotland, where the country people are very fond of it to decorate their apartments, as well as their persons. It is generally found in moist meadows, where the grass is of the soft mossy kind called in Scotland fog, as is beautifully described in the following verse from Allan Ramsay's "Gentle Shepherd :"—

" We 'll pou the daisies on the green ;
The lucken-gowans frae the bog ;
Between hands now and then we 'll lean,
And sport upon the velvet fog."

The Globe-Flower is too well known in gardens to need any detailed description, particularly as it is one of the few wild flowers that has remained quite unchanged by cultivation. It may, however, be interesting to point out to a young botanist, that the golden globe that forms the outer part of the flower is a coloured calyx; and that the petals, which look like metamorphosed stamens, are so small, that they can only be seen by dissecting the flower. The carpels, when ripe, become what are called follicles, that is, they are long and many-seeded; opening naturally, when ripe, for the escape of the seeds.

GENUS VIII.

THE MARSH MARIGOLD. (*CALTHA, Lin.*)*Lin. Syst. POLYANDRIA POLYGYNIA.*

GENERIC CHARACTER.—Calyx and petals five in number, undistinguishable from each other; coloured. Stamens indefinite in number. Ovaries 5—10. Follicles 5—10, compressed, spreading, many-seeded. Perennial, very smooth, herbaceous plants. (Lindley.)

DESCRIPTION, &c.—Only two species of the Marsh-Marigold are natives of Britain, and they are both perennial plants, with smooth leaves and yellow flowers. The word *Caltha* is derived from a Greek word, signifying a cup, in allusion to the shape of the flowers of the common species. Marsh-Marigold appears merely to be applied to the plant because it is yellow like a Marigold, and grows in marshes. The seed-vessels are follicles, each containing many seeds, and opening naturally, when ripe; and the flower, showy as it is, consists only of a coloured calyx, without petals.

1.—THE COMMON MARSH-MARIGOLD. (*CALTHA PALUSTRIS*, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 506; 2d ed., t. 798; and our *fig.* 2, in Pl. 3.SPECIFIC CHARACTER.—Stem erect. Leaves heart-shaped, rounded. (*Smith.*)

DESCRIPTION, &c.—This is one of the most showy of the British plants, and it is also one of the most common, as there are few ponds or slow rivers in Great Britain that have not some of these plants growing on their borders in April and May. The young flower-buds are pickled as a substitute for capers, and their acridity, when softened by the vinegar used in pickling them, gives them nearly the same flavour. In some parts of the country they are called horse-blobs; and unpoetical as this name is, Clare, the Northamptonshire poet, has contrived to introduce it in rhyme:—

“Beneath the shelving bank’s retreat,
The Horse Blob swells its golden ball.”

While another poet more harmoniously describes a marsh, where—

“Caltha in green and gold resplendent towers,
And isles of splendour shine, whose radiance pours
A glory o’er the scene.”

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THE CREEPING MARSH-MARIGOLD. (*C. RADICANS*, *Lin.*)

This plant is not remarkable for its beauty; but it deserves mentioning as being distinct from the other species. Its leaves are also curious from their triangular shape.

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GENUS IX.THE HELLEBORE. (*HELLEBORUS*, *Lin.*)~~~~~
Lin. Syst. POLYANDRIA POLYGYNIA.

GENERIC CHARACTER.—Calyx persistent, of five sepals, which are roundish, obtuse, large, and often green. Petals 8—10, very short, tubular, narrow, and neetariferous at the base. Stamens 30—60. | Ovaries 3—10. Stigmas terminal, orbicular. Follicles coriaceous; seeds arranged in a double row, elliptical, umbilicated. (*Dec.*)

DESCRIPTION, &c.—This genus consists of a few hardy perennial herbs, only two of which are natives of Britain. The Christmas rose, so well known for its ornamental flowers, belongs to this genus, but it is a native of Austria. Helleborus is derived from two Greek words, signifying injurious food, in allusion to the poisonous nature of the plants. The follicles of the Hellebore are somewhat different from those of most of the other plants belonging to the Crow-foot tribe, as they grow together, so as to look like one seed-vessel, till they are closely examined.

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1.—THE STINKING HELLEBORE. (*HELLEBORUS FETIDUS*, *Lin.*)

SYNONYMS.—Bcar’s foot; Setter-wort.

ENGRAVINGS.—Eng. Bot., t. 613; 2d ed., t. 801; and our *fig.* 3, in Pl. 3.

SPECIFIC CHARACTER.—Stem many-flowered, leafy. Leaves pedate.

Petals converging. (*Smith.*)

DESCRIPTION, &c.—This is a very singular plant, from its curious leaves, the footstalks of which are wider than the blades. This plant, though tolerably common in England, is seldom found except on the borders of



1. Globe-flower - Marsh. Hellebore

3. Stinking Hellebore



woods or thickets, or in hedge rows, and it generally grows on chalky soils. The following lines, by Bishop Mant, are very expressive of its habit of growth, and general appearance :—

“ Within the moist and shady glade,  
What plant in suit of green array'd,  
All heedless of the wintry cold,  
Inhabits?—Foremost to unfold,  
Tho' half conceal'd, its bloom globose,  
Whose petals green, o'erlapp'd and close,  
Present each arch'd converging lip  
Embroidered with a purple tip;  
And green its floral leaves expand  
With fingers like a mermaid's hand.”—*Mant's British Months.*

The smell of this plant is very offensive ; notwithstanding which bees are very partial to it, probably because it blooms in winter, or very early in spring, when few other flowers are to be found. This plant had formerly many names, some of them very singular ones. It is easy to guess the origin of Stinking Hellebore, as the plant is so unpleasant in its smell ; and Bear's-foot no doubt alludes to the remarkable shape of the leaves on the flower stalks, which certainly bear some resemblance to a bear's foot ; but Setter-wort and Ox-heal require explanation. They allude to the use made of the plant by country cattle doctors to produce an issue by passing the root through the dewlap or through the heel of cattle ; an operation called by the old farriers setting, probably a corruption of setoning. The powder of the dried leaves is still occasionally given to children in the country, as a cure for worms.

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THE GREEN HELLEBORE. (*HELLEBORUS VIRIDIS, Lin.*)

This species is much handsomer than the preceding one. The flowers, though green, are large and fully expanded ; and the seed vessels are very handsome when nearly ripe. Both the leaves and roots are used as medicine for cattle. This plant is very common in the chalky districts of England ; but it is very rarely found in any other soil.

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GENUS X.

THE COLUMBINE. (*AQUILEGIA, Lin.*)

*Lin. Syst. POLYANDRIA PENTAGYNYIA.*

DESCRIPTION, &c.—The common Columbine (*Aquilegia vulgaris*) is found apparently wild in woods, thickets, and pastures, in many parts of England and Wales. Most probably, however, it is not a true native, but merely “ a garden flower grown wild,” as it is only found in situations where it may very possibly have grown from having been thrown out of a garden. The flowers are very curious in a botanical point of view. The sepals or divisions of the calyx, and the petals or divisions of the corolla, are both exceedingly irregular in form ; and as, in the common Columbine, they are both of the same colour, it is extremely difficult to distinguish the one from the other. The stamens of the Columbine are very numerous, and their filaments completely enclose the carpels, their anthers forming a little tuft in the middle of the flower. Within the perfect stamens is a row of filaments without anthers, which having grown together, form a kind of membrane, which folds round the carpels like a little open bag. The leaves are roundish, and of the kind called binate, that is, they are twice three lobed, each of the large lobes being cut into three smaller ones. The petiole sheathes the stem

as in the other Ranunculaceæ, and the juice is thin and acrid. The seeds of the Columbine are contained in five follicles; and on this account the plant is placed in the Linnæan order Pentagynia, which is applied to plants having five carpels. The word Columbine signifies a little dove, and Aquilegia an eagle, both which birds have been fancied to be represented by the flowers; which having been also supposed to form no bad resemblance to a fool's cap, the Columbine, in the Language of Flowers, is considered the emblem of folly.

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### GENUS XI.

#### THE LARKSPUR (DELPHINIUM, *Lin.*)

*Lin. Syst.* POLYANDRIA TRIGYNYIA.

GENERIC CHARACTER.—Calyx deciduous, petaloid, irregular; the upper sepal elongated at the base into a spur. Petals 4; the two upper ones elongated at the base into appendages contained within the spur. (Dec.)

DESCRIPTION, &c.—Only the branching Larkspur is a native of Great Britain. The name of Larkspur, and also the botanical name of the genus (Delphinium, which signifies a little Dolphin) both refer to the shape of the flowers; which are constructed somewhat like those of the Columbine, the sepals and the petals being mixed together, and both equally ornamental. The genus is usually placed in the Linnæan order Trigynia, because it has generally three follicles, though sometimes it has only two. Sowerby, however, places the genus Larkspur in the Linnæan order, Di-Pentagynia, which signifies having from two to five carpels.

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#### 1.—THE BRANCHING OR FIELD LARKSPUR. (DELPHINIUM CONSOLIDA, *Lin.*)

SYNONYME.—*D. segetum*, *Lam.*; Larkes heeleſ.

ENGRAVINGS.—Eng. Bot., t. 1839; 2d ed., t. 769.

SPECIFIC CHARACTER.—Stem erect, nearly smooth, branching in a

straggling manner. Flowers few, in long racemes. Pedicels longer than the bractæ. Follicles smooth. (Dec.)

DESCRIPTION, &c.—The branching or field Larkspur is found abundantly in the chalky or sandy corn fields of Cambridgeshire, Suffolk, and Kent; but it has not yet been discovered in any other part of England. It is an annual, and springs up amongst the corn while it is yet in the blade. The root descends into the ground like that of the carrot, but it is much longer in proportion to its thickness. The stalk grows a foot or more high, and is divided near the ground into several spreading branches. The leaves are cut into numerous and very slender segments. The flowers are thinly set on the raceme, and being on foot-stalks they hang much more loosely than those of the rocket or garden Larkspur. The flowers are blue, pink, purple, or white. The follicles are smooth on the outside, and are sometimes produced singly, though they are generally two or three together; and there is in each nine or ten seeds, which are black and shining, though they are not smooth, as they are covered with short hairs and very small tubercles.

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### GENUS XII.

#### THE MONK'S-HOOD, OR WOLF'S-BANE. (ACONITUM, *Lin.*)

*Lin. Syst.* POLYANDRIA PENTAGYNYIA.

DESCRIPTION, &c.—The common Monk's-hood, (*A. Napellus*, Smith,) is occasionally found wild in England, though it is certainly not a true native. It is highly poisonous, and several persons have died from eating it

by mistake for celery. The upper part of this flower bears sufficient resemblance to a monk's cowl to explain the name of Monk's-hood; but why it is called Wolf's-bane is not so clear. Aconitum is said to be derived from the name of the city Acone in Bithynia, or from a Greek word, signifying a rock or stone. Napellus, which signifies a small turnip, refers to the fleshy knob at the base of the stem.

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*Sect. 2. Spurious Ranunculaceæ.*

GENUS XIII.

THE BANE-BERRY (ACTÆA, *Lin.*)

*Lin. Syst.* POLYANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx deciduous, of four sepals. Petals four. Berry many-seeded. Perennial herbs. (Dec.)

DESCRIPTION, &c.—This genus is said to belong to the spurious Ranunculaceæ, because its seeds are contained in a berry, instead of being in distinct carpels, according to the character of the order. For the same reason it is placed in the Linnæan order Monogynia. The word *Actæa* is the Greek name for the Elder, in allusion to the leaves of the Bane-berry bearing some resemblance to those of that tree.

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1.—THE COMMON BANE-BERRY, OR HERB CHRISTOPHER. (ACTÆA SPICATA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 918; 2d ed., t. 746.

SPECIFIC CHARACTER.—Raceme erect, elongated. Petals as long as the stamens. Pedicels of the fruit slender. (Smith.)

DESCRIPTION, &c.—This plant is a native of the mountainous districts of Yorkshire and the south of Scotland; but it is only found within a very limited range. It has a creeping root, with an erect stem, white flowers, and dark purple berries which are virulently poisonous, though fortunately they are so nauseous, both in taste and smell, as to be in little danger of being eaten. It is from the poisonous quality of the fruit that the plant takes the name of Bane-berry.

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GENUS XIV.

THE PEONY. (PÆONIA, *Lin.*)

*Lin. Syst.* POLYANDRIA PENTAGYNIA.

DESCRIPTION, &c.—The male Peony (*P. corallina*) having been found growing on a small island in the Severn, this genus has been ranked among British plants, but there is no doubt that it is not a true native. The winter Aconite (*Eranthis hyemalis*) has also been found growing wild occasionally; but it is certainly not a native of Great Britain.

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CHAPTER II.

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THE BERRERRY FAMILY. (BERBERIDEÆ, *Vent.*)

CHARACTER OF THE ORDER.—Sepals 3-4-6, deciduous, in a double row, surrounded externally by petaloid scales. Petals hypogynous, either equal to the sepals in number, and opposite to them, or twice as many, generally with an appendage at the base in the inside. Stamens equal in number to the petals, and opposite to them; anthers generally with two separate cells, opening elastically with a valve from the

bottom to the top. Ovarium solitary, one-celled; style rather lateral; stigma orbicular. Fruit buried or capsular. Seeds attached to the bottom of the cell on one side, 1-2 or 3; albumen between fleshy and corneous; embryo straight in the axis. Shrubs or herbaceous perennial plants, for the most part smooth. (Lindley.)

DESCRIPTION, &c.—This order is distinguished from all others, except the Laurel tribe, by the very peculiar construction of its stamens. It is well known that stamens generally consist of a slender thread-stalk called

the filament, at the end of which is the anther, forming a distinct oblong case, usually divided into two cells, which contain the pollen. In most cases, as soon as the pollen is ripe, the sides of the cells split open, and the powder escapes. In the Berberry tribe, however, there are no distinct anthers; but the filaments are broad and leaf-like, with a cell on each side near the top; and when the pollen is ripe, the epidermis that covers the cell becomes detached at the base, and curls upwards. The stamens are always of the same number as the petals, and placed exactly opposite to them; and this peculiarity, with the recurved valves of the anthers, constitute the characteristics of the Berberry tribe. This tribe is, however, a very small one; as it consists of only three genera: viz., the Berberry, the Mahonia or Ash-Berberry, and the Epimedium or Barrenwort; and even the Berberry and the Mahonia, (which is a native of North America,) are both included in the genus *Berberis* by Dr. Lindley.

#### GENUS I.

##### THE BERBERRY. (BERBERIS, *Lin.*)

*Lin. Syst.* HEXANDRIA MONOGYNIA.

GENERIC CHARACTER.—Sepals 6, in a double row, externally scaly. | 2-3 seeded. Shrubs with spiny stems and leaves, and yellow racemose Petals 6, with two glands at the base of each. Fruit fleshy, one-celled | flowers. (*Lindley.*)

DESCRIPTION, &c.—Besides the curious construction of the anthers, which is common to all the Berberry tribe, the genus *Berberis* is remarkable for the extraordinary irritability of its stamens. The flowers consist of six concave sepals, lined with six concave petals, in each of which lies a stamen pressed closely back. Now if one of these stamens be touched at the base by a pin, or any hard substance, it rises gently up till it touches the stigma. If the pollen should be ripe it is discharged by this movement, and the stamen then loses its elasticity; but if the pollen be not ripe, the stamen remains bending over the stigma for a short time, and then sinks gradually back again. The stamens, however, lose their irritability if the plant be poisoned with any noxious fluid. If the Berberry be watered with a solution of arsenic or any corrosive poison, the filaments become rigid and brittle and incapable of moving; while, on the contrary, if the Berberry be watered with any narcotic poison, such as a solution of opium or deadly nightshade, the filaments become flaccid and lose their power of motion. There are many species of Berberry, but only one is a native of Britain. *Berberis* is the Arabic name of the plant, and is said to signify a shell, in allusion to the concave form of the petals and sepals.

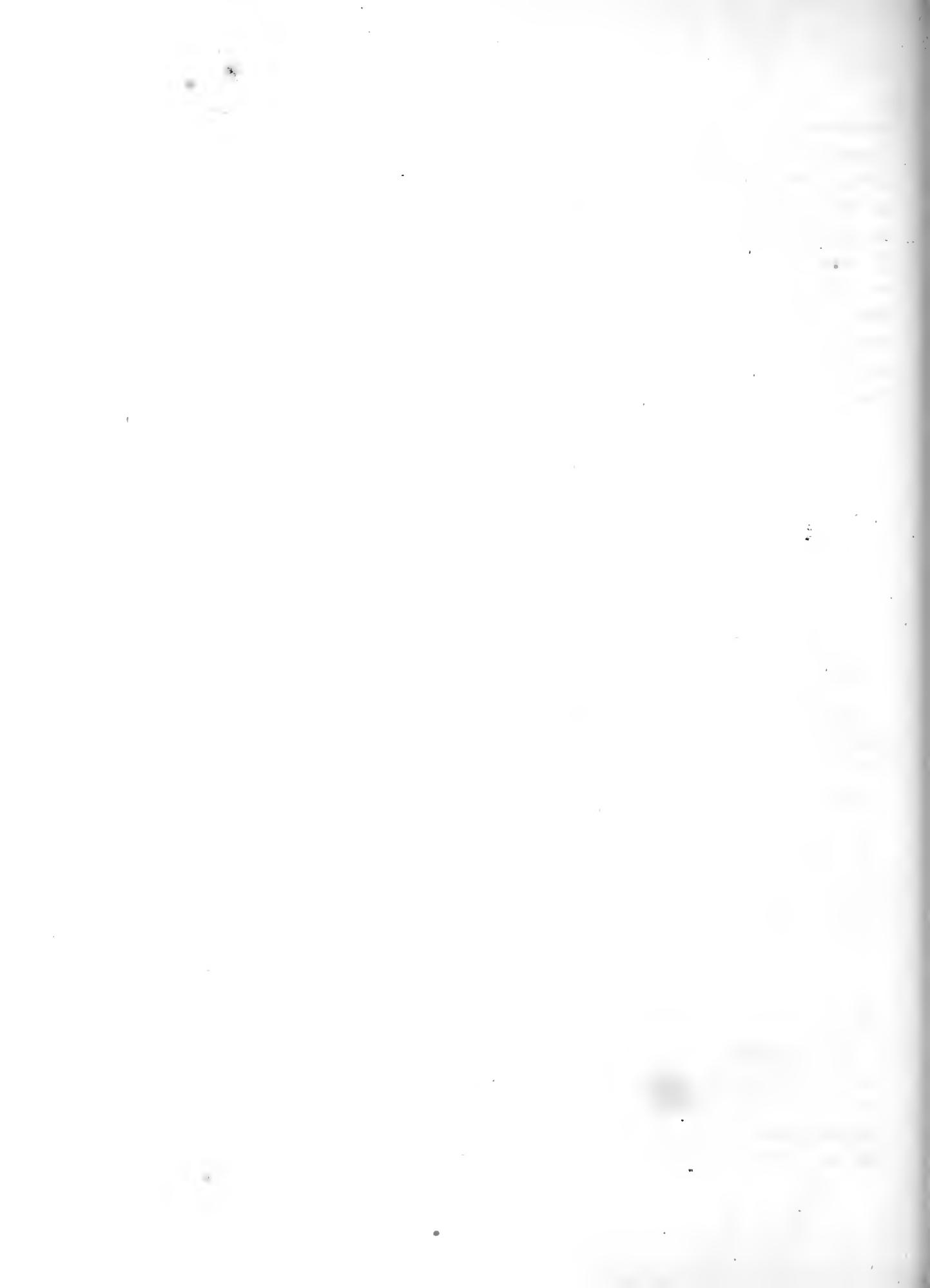
##### 1.—THE COMMON BERBERRY. (BERBERIS VULGARIS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 49; 2d ed., t. 462; and our figs. 1 | SPECIFIC CHARACTER.—Thorns three-cleft. Clusters pendulous. and 2, in Pl. 4. | Leaves obovate-oblong, with bristly serratures. Petals entire. (*Smith.*)

DESCRIPTION, &c.—The common Berberry is found abundantly in hedges and coppices in various parts of England. It grows most luxuriantly, however, on calcareous soils; and it is equally ornamental in flowers and in fruit. The flowers are of a delicate yellow, and hang down in drooping racemes; their parts are all in sixes: for example, there are six petals, six sepals, and six stamens. The fruit is of a brilliant scarlet, and as it is so acid that no bird will eat it, it remains on the tree nearly all the winter; it is, however, used in cookery, both preserved with sugar, and pickled with salt and vinegar. The thorns of the common Berberry will be found on examination to be quite different from the prickles of the rose; they are, in fact, abortive leaves, and they are furnished with the rudiments of a stem clasping petiole, which may be easily traced when



1. Barberry in flower. 2. Barberry in fruit. 3. Burren-wort.



they are young. The root and bark of the Berberry are used for dyeing yellow. One of the most remarkable circumstances respecting this plant is, that it has the reputation of being injurious to corn, and infecting it with a kind of mildew, if it grows near a wheat field; and this is so firmly believed by some farmers, that they will not suffer a single Berberry to remain in the hedges of their arable lands. The origin of this strange fancy is, that the leaves of the Berberry are very often attacked with a kind of fungus or mildew, as it is called, and that the corn is very often destroyed by another kind of mildew or blight, which is also a fungus. The two plants are, however, quite distinct; the Berberry fungus (*Æcidium Berberidis*) being one of the kinds of fungi which form on the outside of the epidermis of the leaf, while the corn mildew (*Puccinia graminis*) is one of the fungi which form under the epidermis, and only burst through it when ripe. The leaves of the Berberry are handsome, and they have a finely serrated margin, but the smell of the flowers is unpleasant. As Bishop Mant says:—

“ See, spines, and saw-like leaves among  
The Berberry’s yellow bunches hung,  
Whose stamens, as with life endued,  
Shrink from the touch of fingers rude;  
And, shrinking, on the pistil’s head,  
The fructifying pollen shed.  
Of aspect pleasing, but of scent  
Which the smell loves not, redolent.”

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## GENUS II.

### THE BARRENWORT. (EPIMEDIUM, *Lin.*)

*Lin. Syst.* TETRANDRIA MONOGYNIA.

GENERIC CHARACTER.—Sepals 4, with two bracteoles. Petals 4, with a scale at the base. Pod oblong, two-valved, one-celled, many-seeded. Herbaceous plants; with compound leaves. (*Lindley.*)

DESCRIPTION, &c.—Only one species in this genus is a native of Britain. The name of Epimedium was used by Dioscorides, but its origin is not known: as it signifies upon the middle, it is supposed to allude to the position of the leaves, which are so deeply cordate, and are so raised above the stem, as to appear attached to their footstalks by the middle. The name of Barrenwort alludes to some supposed medicinal virtues in the plant. The Epimedium, though its flowers are very unlike those of the Berberry, is placed in the same natural order, because it has a stamen in the centre of each petal, and because the construction of the anthers is the same, for the cells open by two valves, which spring back when ripe, and curl upwards, suffering the pollen to escape. The plant is placed in the Linnaean class and order Tetrandria Monogynia, because it has four stamens, and only one seed vessel—*tetra* signifying four.

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#### 1.—THE ALPINE BARRENWORT. (EPIMEDIUM ALPINUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 438; 2d ed., t. 226; and our *fig. 3*, | SPECIFIC CHARACTER.—Radical leaves none; stem leaves twice in Pl. 4. | ternate. (*Smith.*)

DESCRIPTION, &c.—This plant is a doubtful native; but it is occasionally found wild in mountainous woods in the North of England and Scotland. It is a curious little plant, creeping along the ground, with numerous slender succulent stems rising from six inches to a foot high. The flowers appear very early in spring, and the seeds soon ripen; but very shortly afterwards, both the leaves and stems wither, so that the whole plant disappears, till it is revived by the following spring.

## CHAPTER III.

THE WATER-LILY FAMILY. (NYMPHAEACEÆ, *Dec.*)

CHARACTER OF THE ORDER.—Sepals and petals numerous, imbricated, passing gradually into each other, the former persistent, the latter inserted upon the disk which surrounds the pistillum. Stamens numerous, inserted above the petals into the disk; filaments petaloid; anthers adnate, bursting inwards by a double longitudinal cleft. Disk large, fleshy, surrounding the ovary either wholly or in part. Ovary many-seeded, many-celled, with the stigmas radiating from a

common centre upon a sort of flat nucellate cup. Fruit many-celled, not bursting. Seeds very numerous, attached to spongy dissepiments, and enveloped in a gelatinous arillus. Albumen farinaceous. Embryo small on the outside of the base of the albumen, enclosed in a membranous bag; cotyledons foliaceous. Herbs with peltate or cordate fleshy leaves, growing in quiet waters. (*Lindley.*)

DESCRIPTION, &c.—This is a very small order, the flowers of which are interesting to the student in botany, not only for their beauty, but for their construction. The sepals, petals, and stamens are also mixed together, and bear so much resemblance to each other, that in some species it is difficult to distinguish them from each other. The seeds are interesting, as the embryo is very small, and enclosed in a membranous bag quite distinct from the albumen, though both are surrounded by the outer skin of the seed. The stem of these plants is what is called a rhizoma, and is always below the surface of the water; while the leaves, which are large and fleshy, float on the top.

## GENUS I.

THE WHITE WATER-LILY. (NYMPHÆA, *Lin.*)

*Lin. Syst.* POLYANDRIA MONOGYNIA.

GENERIC CHARACTER.—Sepals 4. Petals and stamens numerous, inserted in a disk which surrounds the ovary, and adheres to it. Stigma radiating. (*Lindley.*)

DESCRIPTION, &c.—The common White Water-Lily is the only species of this genus which is a native of Britain. The name of *Nymphaea* alludes to the plants belonging to the genus inhabiting the waters, as the Nymphs or Naiads of the ancients were supposed to do. The genus is placed in Polyandria Monogynia of Linnæus; because it has many stamens and only one capsule.

1.—THE WHITE WATER-LILY. (NYMPHÆA ALBA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 160; 2d ed., t. 765; and our *fig. 1*, in Pl. 5. Petals elliptic-oblong. Rays of the stigma sixteen, recurved. Root horizontal. (*Smith.*)

SPECIFIC CHARACTER.—Leaves heart-shaped, entire; even beneath.

DESCRIPTION, &c.—The White Water-Lily is one of the most beautiful of the British plants, and is found in ponds and still waters in almost every part of England and Scotland. It has been already mentioned in speaking of the order, that the petals, stamens, and sepals bear a great resemblance to each other in shape in all the water-lilies; but in the common White Water-Lily they are easily distinguishable by their colour. The flowers, when closed, show only the four sepals, which are green on the outside. The petals within these are much more numerous, and they are of a pure white and of a fleshy texture: in the centre of these are the stamens, which look, at first sight, like yellow, pointed petals; but which will be found on examination to have anthers at the point, consisting of two long, narrow cells, which split open when the pollen is ripe. The stamens nearest the petals are the broadest, and most leaf-like in their form; but they take more of the ordinary character



1 The White Water Lily 2 The common yellow Water Lily  
3 The small yellow Water Lily



of stamens as they approach the centre of the flower. In the American species, indeed, they lose their leaf-like character altogether. The leaves are broad, and so deeply cordate as to make the leaf-stalk appear attached to the centre of the blade. The rhizoma, or under-water stem, is fleshy, and is said to be used in the Highlands of Scotland to dye a brown or deep chestnut colour; it was also formerly used in medicine. In some places, where it grows in thick mud, it has been known to attain the thickness of a man's arm. The flower opens about seven o'clock in the morning, and closes about four in the afternoon; reopening again the following day. The bud forms below the water, and does not rise to the surface till it is ready to expand; and thus, only leaves may be seen on a pond one day, and it may be covered with flowers the next. The Germans call this plant the sea rose.

The graceful manner in which the Water-Lily appears to repose on the surface of the water, has rendered it a great favourite with the poets; but no lines that have been addressed to it are more elegant than the following by Mrs. Hemans :—

“ O beautiful thou art,  
Thou sculpture-like and stately river queen,  
Crowning the depths, as with the light serene  
Of a pure heart !  
Bright Lily of the wave !  
Rising in fearless grace with every swell,  
Thou seem'st as if a spirit meekly brave  
Dwelt in thy cell.”

It was formerly supposed that the Water-Lily sank below the surface of the water at night, and remained there until the following morning, and Moore alludes to this belief in his well-known lines :—

“ Those virgin Lilies all the night,  
Bathing their beauties in the lake,  
That they may rise more fresh and bright,  
When their beloved sun 's awake.”

The fact is, that the Water-Lily folds up its flowers when the sun goes down, and opens them again in the morning; but this is all, and it is by no means peculiar to the Water-Lily, as many other plants close their flowers at night, and expand them again in the morning.

This species is quite different from the common White Water-Lily of North America, (*N. odorata*, Lin.) which is very fragrant; and the stamens of which, though they have leafy filaments, have distinct anthers. The flowers are also smaller and less beautiful. The British White Water-Lily is very common in gardens, but it is not changed by cultivation.

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#### GENUS II.

#### THE YELLOW WATER-LILY. (*NUPHAR*, *Smith.*)

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*Lyn. Syst. POLYANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Sepals 5-6. Petals 10-18, inserted along with the numerous stamens into a disk which surrounds the base of the ovary. Stigmata radiating. (*Lindley.*)

DESCRIPTION, &c.—This genus was included by Linnaeus in *Nymphaea*, but it has been separated from it on account of the receptacle, or disk, being confined to its natural situation, instead of rising so as to enclose the seed-vessel, as in *Nymphaea*. The flowers are all yellow. *Nuphar* is the Arabic name of the Water-Lily.

1.—THE COMMON YELLOW WATER-LILY. (*NUPHAR LUTEA*, *Smith.*)SYNONYMES.—*Nymphaea lutea*, *Lin.*; Brandy-bottle.ENGRAVINGS.—Eng. Bot., t. 159; 2d ed., t. 766; and our *fig. 2*, in Pl. 5.SPECIFIC CHARACTER.—Sepals five; border of the stigma entire; footstalks two-edged; lobes of the leaves meeting each other. (*Smith.*)

DESCRIPTION, &c.—This species is very inferior in beauty to the White Water-Lily. It is a coarse, vulgar-looking plant, with large, bright yellow flowers, which smell like brandy; and this, with the bottle-like shape of the seed-vessel, has given rise to the name of Brandy-bottle, which, in some parts of England, is applied to the plant. It is very common in every part of the kingdom, but it does not appear to have been ever cultivated.

2.—THE SMALL YELLOW WATER-LILY. (*NUPHAR PUMILA*, *Dec.*)SYNONYMES.—*N. Kalmiana*, *Hook.*; *N. minima*, *Smith*; *Nymphaea pumila*, *Hoffm.*ENGRAVINGS.—Eng. Bot., t. 2292; 2d ed., t. 767; and our *fig. 3*, in Pl. 5.SPECIFIC CHARACTER.—Sepals five; border of the stigma toothed; footstalks two-edged; lobes of the leaves rather distant. (*Smith.*)

DESCRIPTION, &c.—This species is a native of the lakes in the North of Scotland, where it flowers in great abundance in the months of July and August. Its flowers are much handsomer than those of the common species; being not only smaller, and of a more graceful shape, but of a better colour. They also have not the smell of brandy, which is so disagreeable in the other species of the genus.

## CHAPTER IV.

THE POPPY FAMILY. (*PAPAVERACEÆ*, *Juss.*)

CHARACTER OF THE ORDER.—Sepals 2, deciduous. Petals hypogynous, either 4, or some multiple of that number, inserted in a eruciate manner. Stamens hypogynous, either 8, or some multiple of four, generally very numerous, inserted in four parels, one of which adheres to the base of each petal; anthers 2-locular, innate. Ovarium solitary; style short or none; stigmata alternate with the placentæ, 2 or many; in the latter case stellate upon the flat apex of the ovary.

Fruit 1-celled, either siliquiform with two parietal placentæ, or capsular with several placentæ. Seeds numerous. Albumen between fleshy and oily. Embryo minute, straight, at the base of the albumen, with plano-convex cotyledons. Herbaceous plants or shrubs with a milky juice. Leaves alternate, more or less divided. Peduncles long, one-flowered. Flowers never blue. (*Lindley.*)

DESCRIPTION, &c.—The Poppy tribe includes numerous genera, the flowers of which are generally large and eup-shaped, bearing a considerable resemblance to those of the Crowfoot family, but with only four petals instead of five. It may be observed, indeed, that, with some few exceptions, which are seldom found in the British species, all the plants belonging to the Poppy tribe have the parts of their flowers in even numbers, such as two sepals, four petals, and eight, sixteen, or thirty-two stamens. The Crowfoot family, on the contrary, has a tendency to uneven numbers, and the parts of its flowers are generally in fives. When the stamens of the Poppies are very numerous, they are generally divided into four parels, one of which is attached to the base of each petal. The anthers are what is called innate, that is, one end of each is attached to the end of a filament, instead of being adnate like those of the Crowfoots, where the filament grows up the whole length of the anther, being firmly attached to the back. The leaves of the Poppy tribe are alternate, and more or less cut like those of the Crowfoots, but the petioles do not sheath the stem. The juice of the Poppy tribe is also thick and glutinous, while that of the Crowfoots is thin and acrid.

## GENUS I.

THE POPPY. (PAPAVER, *Linnaeus.*)*Lin. Syst.* POLYANDRIA MONOGYNIA.

GENERIC CHARACTER.—Sepals 2, convex. Petals 4. Stamens | numerous. Style none. Stigmata 4-10, radiating, sessile on the top | of the ovary. Capsule one-celled, dehiscing by minute valves | concealed beneath the projecting rim of the top. Placenta projecting | into the cavity, and forming incomplete dissepiments. Herbaceous | plants, with divided leaves and white milky juice; the peduncles | inflexed before flowering.—(Lindley.)

DESCRIPTION, &c.—The milky juice of the true Poppies is always white, while that of most of the other genera belonging to the order is yellow. There are several carpels, the number varying from four to twelve, enclosed in the fleshy disk, which is dilated, and rises up round them in the same manner as in the capsule of the Water Lily. The stigmas of the carpels also remain on, as in that plant, and form a crown to the capsule; but here the resemblance ceases, as the capsule of the Poppy opens naturally by little valves, one to each carpel, immediately under the lid of the stigmas. The dilated disk of the Poppy, when young, is fleshy, and when wounded with a sharp knife, a white, milky juice exudes, that, when dry, is called opium; but when old, the capsule becomes dry, hard, and brittle, as may be seen in the Poppy-heads used for making fomentations, and sold in the druggists' shops. The sides of the carpels form partitions in the young capsule, but, as the seeds ripen, the partitions waste away, till at last only very slight remains of them are found in the dry Poppy-heads. The seeds are at first attached to these partitions, or dissepiments, as they are called, but they become quite loose when ripe. The seeds contain a small embryo, and abundance of albumen, which is partly oily and partly floury, but not in the slightest degree narcotic; and, on this account, the seeds are perfectly wholesome, and are used in making oil, and for other purposes. In most of the species the capsule is ribbed on the outside, at the division of the carpels. The names of Papaver and Poppy are both said to be derived from pap, the food given to children, with which opium was formerly frequently mixed, to induce sleep; but this seems a very far-fetched and improbable derivation.

1.—THE CORN-POPPY. (PAPAVER RHÆAS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 645; 2d ed., t. 755; and our fig. 2, | many-rayed. Stem many-flowered, rough, like the flower stalks, with | in Pl. 6. spreading bristles. Leaves pinnatifid, cut. (Smith.)

SPECIFIC CHARACTER.—Capsule smooth, nearly globular, stigma

DESCRIPTION, &c.—This, though a troublesome weed in corn-fields, is one of the most showy of the British plants; and it is one of the best known, as it is an annual, flowering in June, July, and August, when people are frequently in the country. It is most abundant in chalky soils, but it is found more or less in every part of England, though it is rare in Scotland. The farmers call it Red-weed, Red-cap, and Corn Rose, in different parts of the kingdom, and they find it extremely troublesome; as the seeds are generally ripe just about the time that the Corn is cut, and thus mix with the seed Corn, so as to render it difficult to avoid sowing it with the Corn the following season. The seeds are black, shining, very small, and very numerous. The wild Poppy does not produce much opium; but what is called Syrup of Poppies is made from its petals, and its dried capsules are sometimes sold under the name of Poppy-heads, though they are considered very inferior to those of the White Poppy. The seeds are used abroad for making oil; but those produced by plants grown in this country have so little oil in them, as not to be worth crushing. According to the heathen mythology, the Poppy was raised by Ceres to compose her spirits, when she was in despair at the loss of her daughter

Proserpine, and wandered through the world in search of her; and as Ceres was the Goddess of Wheat, the Poppy very naturally took its place in corn-fields. It is in allusion to this fable that one of the older poets says:—

“ Indulgent Ceres knew its worth,  
When to adorn the teeming earth,  
She bade the Poppy rise;  
Not merely gay the sight to please,  
But blessed with power, mankind to ease,  
And close the aching eyes.”

“ Seize, happy mortals, seize the good,  
One field supplies thy sleep and food,  
And makes thee truly blest;  
With plenteous meals, enjoy the day,  
In slumbers pass the night away,  
And leave to heaven the rest.”

The Poppy was one of those herbs which were formerly thought of no efficacy unless they were gathered when the moon shone. Culpeper mentions this in his very curious work called the *English Physician*, which was published in the time of the Commonwealth (1652), and he adds:—“ Of the juice of it is made opium; only, for the lucre of money, they will cheat you, and tell you it is a kind of tear, or some such like thing, that drops from Poppies when they weep; and that is somewhere beyond the sea, *I know not where beyond the moon.*” In some country places the young girls try a species of divination with the Poppy; placing one of the petals in the hollow of the left hand, and striking it sharply with the right, when, if the petal snapped, it was considered a proof that the lover was constant, while, if it made no noise, the lover was supposed unfaithful.

“ By a prophetic Poppy-leaf I found  
Your changed affection—for it gave no sound,  
Though in my hand struck hollow, as it lay;  
But quickly withered, like your love, away.”

## 2.—THE LONG SMOOTH-HEADED POPPY. (PAPAVER DUBIUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 644; 2d ed., t. 754. | many-flowered, hairy. Bristles on the flower-stalks close-pressed.  
SPECIFIC CHARACTER.—Capsule smooth, oblong, angular. Stem | Leaves doubly pinnatifid. (*Smith.*)

DESCRIPTION, &c.—This species is very common in many parts of England, particularly in light sandy soils. It is an annual, and flowers in June and July. It very closely resembles the common Corn Poppy; but the flowers are rather paler and larger, and the hairs on the flower-stalk are pressed closely to the stem, giving them a silky appearance, instead of spreading horizontally as in the common Poppy. The leaves are also much more deeply cut. When the petals have fallen, the difference is still more striking, as the long slender capsule of this species can never be confounded with the large round capsule of the common Corn Poppy.

## 3.—THE LONG PRICKLY-HEADED POPPY. (PAPAVER ARGEMONE, *Lin.*)

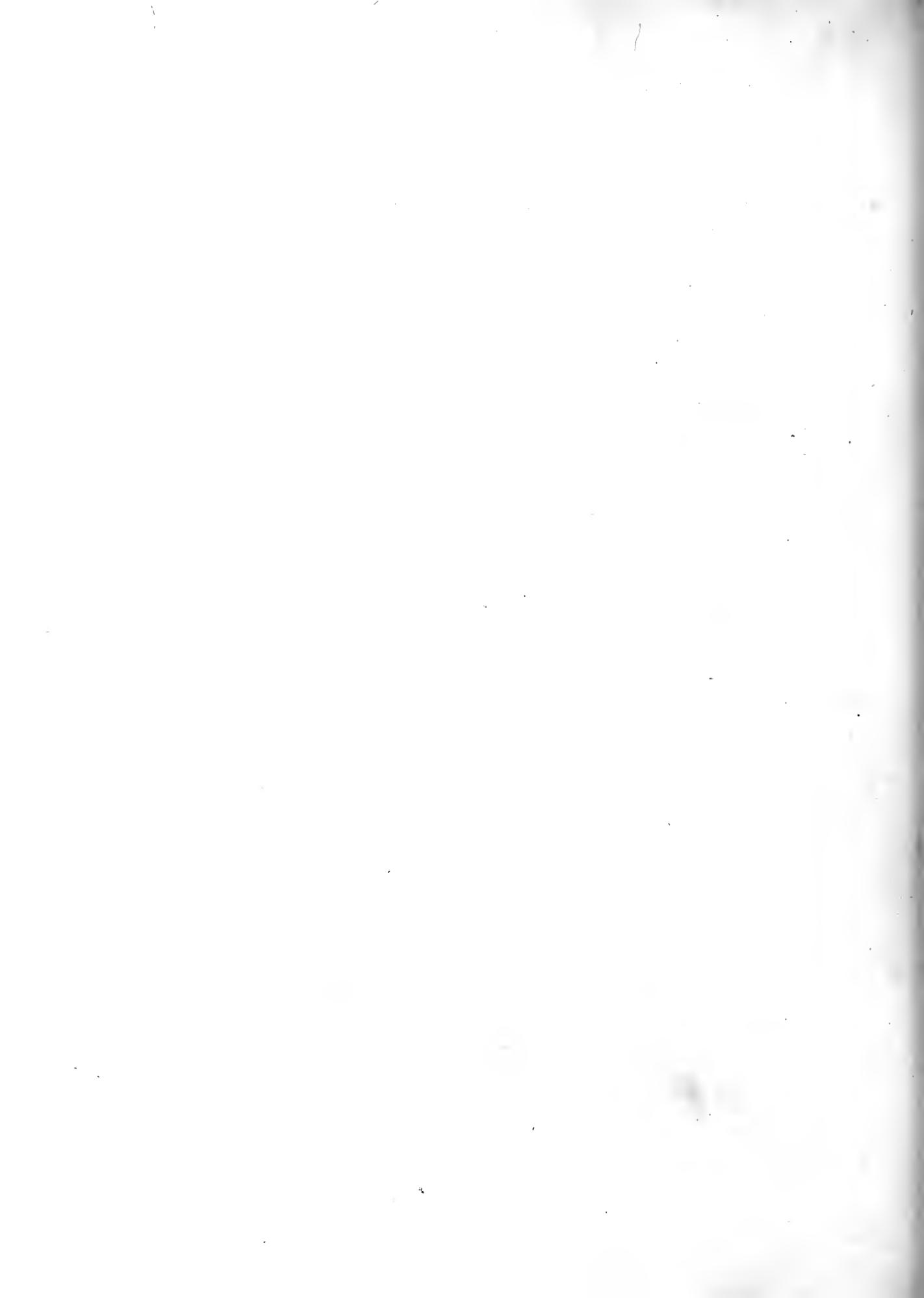
ENGRAVINGS.—Eng. Bot., t. 643; 2d ed., t. 752; and our *fig. 3*, | slightly hairy. Stem leafy, many-flowered. Leaves doubly pinnatifid. (*Smith.*)  
in Pl. 6.

SPECIFIC CHARACTER.—Capsule club-shaped, ribbed, bristly. Calyx

DESCRIPTION, &c.—An annual species, a native of corn-fields and waste ground, on gravelly or sandy soils. The plant is extremely unlike a Poppy in the shape of its flowers, as the petals are long, narrow, and widely apart. The flowers are of a dull scarlet, and the capsule is long and narrow, being covered with prickles at the upper end. The leaves are of the kind called bipinnatifid.



1. The White or opium Poppy 2. The corn Poppy 3. The long prickly-headed Poppy.  
4. The naked Stalked Yellow Poppy.



4.—THE NAKED-STALKED YELLOW POPPY. (PAPAVER NUDICAULE, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 2681; 2d ed., t. 753\*; and our *fig. 4*, in Pl. 6.

SPECIFIC CHARACTER.—Capsule hispid, obovate-oblong. Sepals

bristly. Peduncles very long, arising from the root. Leaves pinnatifid, with toothed or cut lobes. (Dec.)

DESCRIPTION, &c.—This is a very pretty little plant; but it has certainly no pretensions to be called a native of Britain, and it has only been figured by the mistake of our artist. It is a native of the Arctic regions, and has only been found growing wild in one place in the north of Ireland. It is a perennial and flowers in July and August. The stem and leaves are densely covered with a brownish pubescence.

5.—THE WHITE POPPY. (PAPAVER SOMNIFERUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 2145; 2d ed., t. 756; and our *fig. 1*, in Pl. 6.

SPECIFIC CHARACTER.—Capsule nearly globular, smooth as well as

the calyx and stem. Leaves notched, clasping the stem, glaucous. (Smith.)

DESCRIPTION, &c.—This Poppy, like the preceding species, has no just claim to be considered a native of Britain; though, having been long cultivated for medicinal purposes, it has become so far naturalised as to be met with growing apparently wild in many parts of England. It is easily distinguished from all the other Poppies by the breadth and colour of its leaves, which are of a blue or glaucous green, and the robustness of its growth. The flowers are very handsome, and the double varieties are well known in gardens. It is, however, only the single ones that are cultivated for opium, poppy-heads, and poppy seeds. The large poppy-heads sold by the druggists, which are frequently used to make an inferior kind of opium, are the dry capsules of this plant; while the smaller ones are those of the common Corn Poppy. The best opium is generally procured from this species, as in this the dilated disk is much thicker than in any other. On the Continent the seeds are not only crushed for oil, but are used for strewing over various kinds of cake, as they are considered very nutritious.

THE HYBRID POPPY. (P. HYBRIDUM, *Lin.*)

This species is seldom met with except in the southern counties of England, where it is an annual, flowering in July.

## GENUS II.

THE WELSH POPPY. (MECONOPSIS, *Vig.*)

*Lin. Syst.* POLYANDRIA MONOGYNIA.

GENERIC CHARACTER.—Sepals two. Petals four. Stamens numerous. Style short. Stigmas four to six, radiating, convex, distinct. Capsule one-celled, dehiscing by four to six valves at the top. Plano-convex, narrow, scarcely projecting. Perennials with yellow juice. (Dec.)

DESCRIPTION, &c.—This genus is distinguished from the Poppy principally by its yellow juice. It has, however, also, a short style; while the stigmas of the Poppy are sessile. The name of Meconopsis is derived from two Greek words signifying like a Poppy. There is only one species in the genus.

1.—THE COMMON WELSH POPPY. (MECONOPSIS CAMBRICA, *Vig.*)

SYNONYME.—*Papaver Cambricum*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 66; 2d ed., t. 751; and our *fig. 3*, in Pl. 7.

SPECIFIC CHARACTER.—Capsule smooth, with five or six valves.

Leaves numerous, stalked, pinnate, cut. (Lindley.)

DESCRIPTION, &c.—This is a very elegant plant with a somewhat succulent habit of growth. It is common in the mountainous districts of England, and particularly in North Wales, where it is very abundant in the

neighbourhood of cascades and waterfalls. It is also frequently found near rocks and glens in Wales, and in similar situations in other parts of the kingdom.

The flowers of this plant are very like those of the common Poppy, but they are of a bright yellow; and the capsule has sometimes only five stigmas in its cover. It has been sometimes confounded with the yellow poppy (*Papaver nudicaule*); but it is very distinct, even at first sight—that plant having small flowers and a hairy stem, and this having large flowers and a smooth stem. Besides, *P. nudicaule* is fragrant, which the Welsh Poppy is not.

### GENUS III.

#### THE HORNED-POPPY. (GLAUCIUM, *Juss.*)

*Lin. Syst.* POLYANDRIA MONOGYNIA.

GENERIC CHARACTER.—Petals four. Stamens numerous. Pod long, two-valved, with the placenta meeting in the middle, and forming a spongy dissepiment, which divides the cavity of the pod into two

cells. Seeds destitute of a crest. Biennials, with glaucous, scabrous, pinnatifid leaves, and yellow milky juice. (*Lindley.*)

DESCRIPTION, &c.—Every one who has visited Brighton, or any of the other watering-places on the Sussex coast, must have observed the great number of plants of the yellow Horned-Poppy which are found on every cliff; and often on the sea-shore, even within the reach of the waves.

“There bright as gems of fairy lore,  
Or Eastern poet’s dream,  
The Horned-poppies gild the shore  
With sunny gleam.” ANON.

The leaves are large and of a pale blue green, as nearly as possible the colour of the sea; and the horn-like pods, which are generally about a foot long, are of the same colour. The flowers are large and very handsome, but they soon fall. The name of *Glaucium* alludes to the glaucous colour of the leaves; and the Horned-Poppy to the long narrow pods, which stick up through the leaves like horns.

#### 1.—THE YELLOW HORNED-POPPY. (GLAUCIUM LUTEUM, *Scop.*)

SYNONYMES—*G. flavum*, *Crantz*; *Chelidonium Glaucium*, *Lin.*; The Sea Celadine.

SPECIFIC CHARACTER.—Stem smooth. Stem-leaves wavy. Pod roughish, with minute tubercles. (*Smith.*)

ENGRAVINGS.—Eng. Bot., t. 8.; 2d ed., t. 748; and our *fig. 1*, in Pl. 7.

DESCRIPTION, &c.—This plant is abundant on the sea-coast of Sussex, and it is extremely ornamental as it continues in flower the whole summer. It is also a very handsome garden flower. The root of this plant is very long and it strikes deeply into the ground, so that when it is cultivated in gardens it will not grow well unless the soil is somewhat sandy and sufficiently loose for the root to strike into it. For the same reason, when cultivated in gardens, it should be sown where it is to remain, as it will not bear transplanting. The whole plant abounds in a glutinous, yellow juice which has a very offensive smell, and is said to occasion madness in those who take it.

It is sometimes called an annual and sometimes a biennial; but the fact is, that though it will flower the first year when raised from seed, it will live several years on the sea-coast, or in any situation not quite



1. Yellow Horned Poppy. 2. Scarlet Horned Poppy. 3. Welsh Poppy.  
4. Fritlit Horned Poppy. 5. Common Celandine.



beyond the influence of the sea-air, while at a distance from the sea it seldom survives the first summer. It may be considered, indeed, almost a marine plant.

Say, dost thou spring from earth,  
Or from the sea derive thy birth,  
Thou bright and dazzling flower ?  
The wild wave roars around thy throne,  
And seems to claim thee for its own,  
Thou emperor of an hour !

And spite of winter's snow and summer's rain,  
Firm as the rock itself wilt thou remain.

There ! plain upon thy leaves imprest,  
Ocean has left its foamy crest,  
Frosting thy crown of gold ;  
Yet deep into the yielding sand,  
Thy tapering root hath ta'en its stand,  
With steadfast hold ;

## 2.—THE SCARLET HORNED-POPPY. (*GLAUCIUM CORNICULATUM*, *Curtis.*)

SYNONYMES.—*G. phoeniceum*, *Smith* ; *Chelidonium corniculatum*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 1433 ; 2d ed., t. 749 ; and our *fig. 2*, in Pl. 7.

SPECIFIC CHARACTER.—Stem hairy. Stem-leaves pinnatifid, cut.

Pod rough, with upright bristles. (*Smith.*)

DESCRIPTION, &c.—This is a very showy annual, occasionally found wild on the sea shore of the Eastern coast of England, but rather a doubtful native. It is, however, a very handsome plant, and well deserving of cultivation.

## 3.—THE VIOLET HORNED-POPPY. (*GLAUCIUM VIOLACEUM*, *Smith.*)

SYNONYMES.—*Chelidonium hybridum*, *Lin.* ; *Römeria hybrida*, *Dec.*

ENGRAVINGS.—Eng. Bot., t. 201 ; 2d ed., t. 750 ; and our *fig. 4*, in Pl. 7.

SPECIFIC CHARACTER.—Pods three to four-valved, erect, with rigid

bristles at the apex. Leaves doubly pinnatifid, linear, smooth. (*Lindley.*)

DESCRIPTION, &c.—This is a very beautiful plant, but its beauty is of the most fugitive nature that can be imagined, as the petals fall almost as soon as they have expanded. It is an annual, and it is found in corn-fields in Norfolk and Cambridgeshire ; but it is a very doubtful native.

## GENUS IV.

### THE CELANDINE. (*CHELIDONIUM*, *Lin.*)

*Lin. Syst. POLYANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Sepals two, smooth. Petals four. Stamens | valves opening from bottom to top. Seeds crested. Herbaceous plants numerous. Pod long, two-valved ; the placentæ not connate ; the | with smooth, brittle, tender leaves, and an acrid yellow juice. (*Lindley.*)

DESCRIPTION, &c.—The common Celandine, or Swallow-wort, as it is sometimes called, is very abundant in church-yards and waste places in almost every part of England ; but it flourishes most in calcareous soils. The name of Chelidonium is derived from a Greek word which signifies a swallow ; and it alludes to a superstition, which was formerly very generally believed, that young swallows could not see till the old birds had anointed their eyes with the juice of this plant. The name of Swallow-wort alludes to the same fancy. Culpeper says that this herb, if gathered when the sun is in the sign of the Lion, is the best cure of all diseases of the eyes ; and it is said to be used in the composition of several quack medicines used for such complaints.

1.—THE GREATER CELANDINE. (*CHELIDONIUM MAJUS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1581; 2d ed., t. 747; and our *fig. 5*, with rounded segments, the lobes of which are toothed. Petals in Pl. 7.

SPECIFIC CHARACTER.—Peduncles umbellate. Leaves pinnatifid,

DESCRIPTION, &c.—The deep yellow juice of this plant is extremely acrid, and in country places it is given to children to rub on their hands to remove warts, and also to cure ring-worm and other cutaneous diseases. It is also used, when mixed with milk, to remove white specks from the eye. There is a variety, with sharply cut leaves and serrated petals, which some botanists consider to be a distinct species.

## CHAPTER V.

THE FUMITORY FAMILY. (*FUMARIACEÆ, Dec.*)

CHARACTER OF THE ORDER.—Sepals two, deciduous. Petals four, cruciate, parallel; the two outer, either one or both, saccate at the base; the two inner callous, and coloured at the apex, where they cohere and enclose the anthers and stigma. Stamens six, in two parcels, opposite the outer petals; anthers membranous, all two-celled, except by abortion. Ovarium superior, one-celled; ovula

horizontal; style filiform; stigma with two or more points. Fruit various; either an indehiscent one or two-seeded nut, or a two-valved polyspermous pod. Seeds horizontal, shining, with an arillus. Albumen fleshy. Embryo minute, out of the axis; in the indehiscent fruit straight; in those which dehisce, somewhat arcuate. Herbaceous plants with brittle stems and a watery juice. Leaves multifid. (*Lindley*)

DESCRIPTION, &c.—This order has been included by some botanists in the Poppy tribe; but the plants included in it differ from the Poppies, in having a watery juice; and they are also easily distinguished by the singular shape of their flowers. The order contains two genera:—viz., *Corydalis*, the fruit-vessel of which is a pod, containing many seeds; and *Fumaria*, the fruit of which is a one or two-seeded nut. All the *Fumarias*, and one species of *Corydalis*, are annuals.

## GENUS I.

THE MANY-SEEDED FUMITORY. (*CORYDALIS, Dec.*)

*Lin. Syst. DIADELPHIA HEXANDRIA.*

GENERIC CHARACTER.—Petals four, of which one is calcareate at the base. Pod two-valved, compressed, many-seeded. (*Dec.*)

DESCRIPTION, &c.—The plants belonging to this genus have rather ornamental flowers, which are spurred at the base. The leaves are generally very much cut, and sometimes have long tendrils. The genus has been separated from *Fumaria*, on account of its seeds being numerous; though *Corydalis* is the ancient Greek name for the Fumitory. It is placed in the Linnaean class *Diadelphus* because the stamens are in two distinct groups or parcels, and *Diadelphus* signifies two brotherhoods; and the order is *Hexandria* because there are six stamens.

1.—THE SOLID BULBOUS CORYDALIS. (*CORYDALIS SOLIDA, Hook.*)

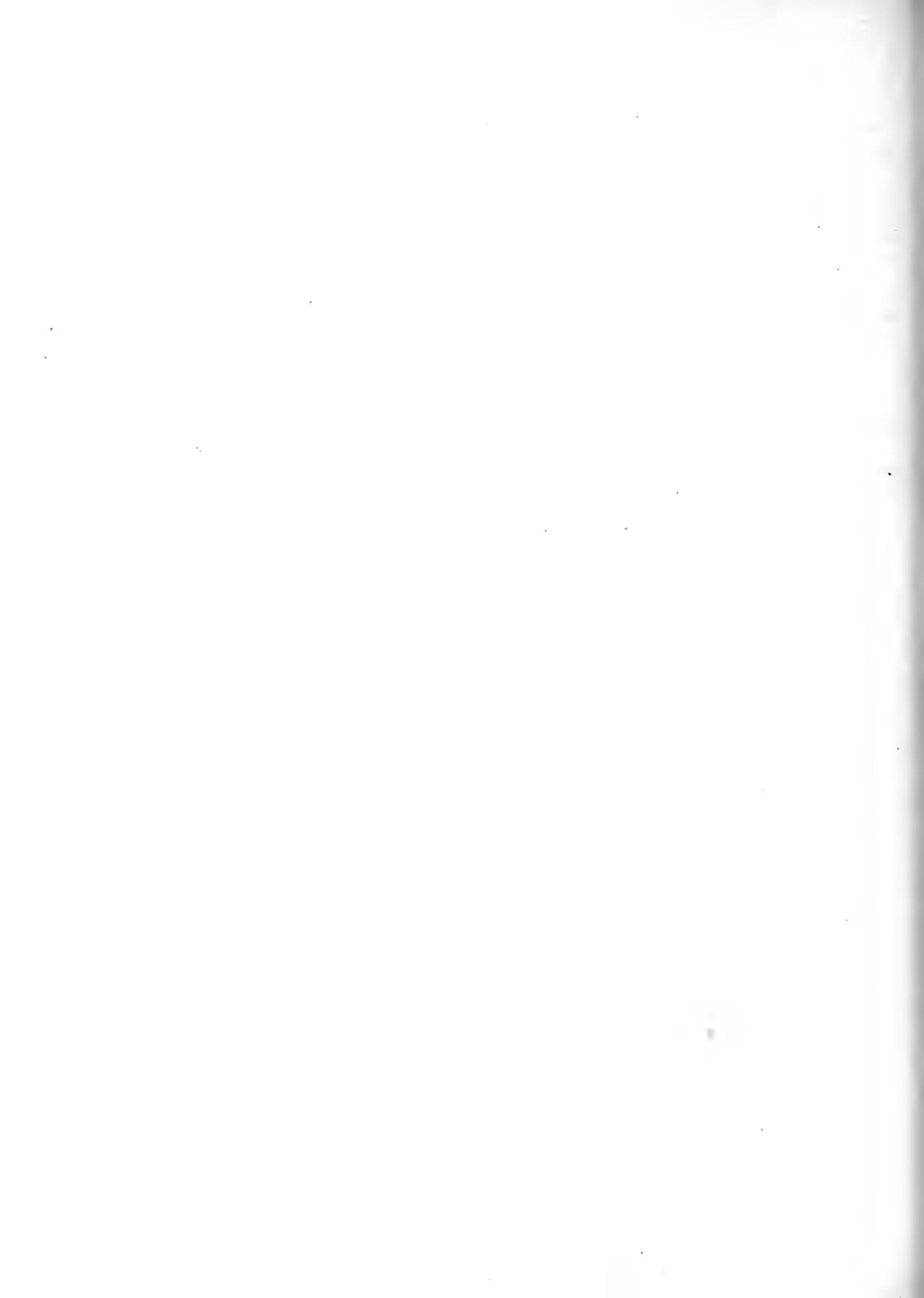
SYNONYMES.—*C. bulbosa, Dec.*; *Fumaria solida, Lin.*

ENGRAVINGS.—Eng. Bot., t. 1471; 2d ed., t. 983; and our *fig. 1*, SPECIFIC CHARACTER.—Stem mostly simple, erect. Leaves twice in Pl. 8.

DESCRIPTION, &c.—This is a very beautiful plant, and, though it is said not to be a true native, it has been found wild in many parts of England. It is particularly abundant near the lakes of Westmoreland, and at



1 Solid-bulbous Corydalis. 2 Yellow Corydalis. 3 White climbing  
Corydalis. 4 Common Fumitory. 5 Rampions Fumitory



Handsworth, near Birmingham. It is called the solid bulbous *Corydalis*, to distinguish it from a species called the hollow-rooted *Corydalis*, which, in its natural state, appears as though a piece had been cut out of one side of the bulb ; and sometimes as though the whole of the inside of the bulb had been hollowed out. Both species are very abundant in Sweden, and other countries in the north of Europe, but only the solid kind is found wild in England. Wherever it takes root, however, it spreads rapidly, by the formation of a number of its tuber-like bulbs, but it rarely ripens its seeds in gardens. The tubers abound in a floury substance, and are said to form the principal winter's provision of the Kalmucs and other wild nations in the North. The species is a perennial, and flowers in April and May.

2.—THE YELLOW CORYDALIS. (*CORYDALIS LUTEA*, *Dec.*)

SYNONYMES.—*C. capnoidea*, *Dec.* ; *Fumaria lutea*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 588 ; 2d ed., t. 984, and our *fig. 2*, in Pl. 8.

SPECIFIC CHARACTER.—Pods nearly cylindrical, shorter than their stalks. Stem angular, erect. Bracteas minute. Spur short, rounded. (*Smith.*)

DESCRIPTION, &c.—Though this species is extremely common on old walls in various parts of England, and though it is a troublesome weed in many gardens, it is said not to be a true native of this country, but to have been originally introduced from Barbary about the year 1500 ; it is also said that the reason it appears to have taken such complete possession of the English soil is, that its seed pod opens with elasticity when ripe, and scatters the seed to a considerable distance. The roots are fibrous, but descend very deeply into the ground, so that it is extremely difficult to eradicate it, when it is once established. The stem is, however, very brittle, and is easily broken off close to the ground. It is a perennial, and flowers in May and June.

3.—THE WHITE CLIMBING CORYDALIS. (*CORYDALIS CLAVICULATA*, *Dec.*)

SYNONYME.—*Fumaria claviculata*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 103 ; 2d ed., t. 985 ; and our *fig. 3*, in Pl. 8.

SPECIFIC CHARACTER.—Pods lanceolate, undulated. Stem climbing. Foot-stalks ending in branched tendrils. (*Smith.*)

DESCRIPTION, &c.—This is a very pretty little climbing plant, growing wild in many places both in England and Scotland, wherever the soil is at once sandy and damp, and the situation tolerably shady. It has sometimes a very pretty effect when it grows in woods, and twines itself round the branches of the trees, or hangs from their branches ; or when it covers the thatched roof of a cottage, which it often does in the southern and eastern counties of England. It is seldom found in gardens, though it well deserves to be cultivated, on account of the great rapidity and luxuriance of its growth. It is an annual, and flowers the greater part of the summer.

GENUS II.

THE FUMITORY. (*FUMARIA*, *Tourn.*)

*Lin. Syst. DIADELPHIA HEXANDRIA.*

GENERIC CHARACTER.—Petals four, the three upper connate at the base, the intermediate one being saccate. Fruit indehiscent, monospermous, not pointed by the style. (*Dec.*)

DESCRIPTION, &c.—All the British *Fumarias* are annuals, and very common weeds. The name of *Fumaria* is derived from the Latin word *fumus*, smoke, in allusion to the smell of the plant ; and on this account it is also sometimes poetically called smoke of the earth. It belongs to the same Linnæan class and order as the *Corydalis*.

1.—THE COMMON FUMITORY. (*FUMARIA OFFICINALIS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 589; 2d ed., t. 986; and our *fig. 4*, | globose, abrupt, on upright stalks, twice as long as the bracteas. Stem in Pl. 8.

SPECIFIC CHARACTER.—Cluster rather lax. Pods single-seeded,

DESCRIPTION, &c.—This is an extremely common plant in every part of England, though it is only found in dry soils, and generally by the roadside, or in corn-fields. Though the flowers do not possess any particular beauty, the general aspect of the plant is very pretty, from the feathery lightness of its deeply-cut glaucous leaves. The flowers are purple or red, and their shape somewhat resembles that of the flowers of *F. capreolata*, but they are smaller and less elegantly formed. One of the popular names of this plant is Bloody Man's Thumb, and Shakspere calls it the “rank Fumiter,” and places it among the weeds that Lear had crowned himself with in his madness.

“Crown'd with rank Fumiter and Furrow weeds,  
With Harlocks, Hemlock, Nettles, Cuckoo-flowers,  
Darnel, and all the idle weeds that grow  
In our sustaining corn.”—*King Lear.*

2.—THE SMALL-FLOWERED FUMITORY. (*FUMARIA PARVIFLORA*, *Lam.*)

ENGRAVINGS.—Eng. Bot., t. 590; 2d ed., t. 988.

SPECIFIC CHARACTER.—Cluster lax; pods single-seeded, | pointed; stem spreading; segments of the leaflets linear, channelled.

DESCRIPTION, &c.—This species is found on sandy or dry chalky soils in the southern counties of England, particularly in Kent and Surrey. It grows generally in corn-fields, or rather on the pieces of waste ground near the hedges; and it bears considerable resemblance to the common Fumitory, but the flowers are still smaller, and the leaves more finely cut. There are two or three varieties: one with white flowers; another, the flowers of which are white tipped with purple, and the leaves glaucous; and a third with rose-coloured flowers and yellowish-green leaves.

3.—THE RAMPING FUMITORY. (*FUMARIA CAPREOLATA*, *Lin.*)

SYNONYME.—*F. media*, *Lois.*

ENGRAVINGS.—Eng. Bot., t. 943; 2d ed., t. 987; and our *fig. 5*, | globose; stem climbing by means of the twisting footstalks; leaflets in Pl. 8.

SPECIFIC CHARACTER.—Cluster rather lax; pods single-seeded, wedge-shaped, lobed. (*Smith.*)

DESCRIPTION, &c.—This species is one of the handsomest of all the kinds of Fumaria. It is common in every part of England, and in some parts of the Continent, though, singularly enough, it is not found in Sweden, where all the other species of this genus, and also of *Corydalis*, are extremely abundant. The old botanists fancied it a variety of the common Fumitory, but it is perfectly distinct from that plant, not only from the shape of its flowers, but from its climbing by the petioles of its leaves, in the same manner as the Clematis, in which it differs from every other species of Fumitory. The leaves are also bipinnate, and the leaflets generally very broad, except in the neighbourhood of Edinburgh, where they are narrow. It is, however, a plant that varies very much in different situations; but the flowers are always very much handsomer and larger than those of the common Fumitory. It generally grows in corn-fields, or on heaps of rubbish by the roadside, and very often comes up as a weed in gardens.

## CHAPTER VI.

THE CRUCIFEROUS FAMILY. (CRUCIFERÆ, *Juss.*)

CHARACTER OF THE ORDER.—Sepals four, deciduous, cruciate. Petals four, cruciate, alternate with the sepals. Stamens six, of which two are shorter, solitary, and opposite the lateral sepals, occasionally toothed; and four longer, in pairs, opposite the anterior and posterior sepals, generally distinct, sometimes connate, or furnished with a tooth on the inside. Disk with various green glands between the petals and the stamens and ovary. Ovary superior, unilocular, with parietal placentæ often meeting in the middle, and forming a spurious dissepiment. Stigmata two, opposite the placentæ. Fruit

a siliqua or silicula, one-celled, or spuriously two-celled; one, or many-seeded; dehiscing by two valves separating from the septum; or indehiscent. Seeds attached in a single row by a funiculus to each side of the placentæ, generally pendulous. Albumen none. Embryo with the radicle folded upon the cotyledons. Herbaceous plants, annual, biennial, or perennial, very seldom suffruticose. Flowers usually yellow or white: seldom purple. Leaves alternate. Bracts none. (*Lindley.*)

DESCRIPTION, &c.—The number of British plants belonging to the Cruciferæ is very considerable, and among them are included the Wild Cabbage, the Sea Kale, the Radish, the Turnip, the Horse-radish, and various other well-known plants. All these are easily known by their flowers, which have four petals, disposed in the form of a cross, and hence the name given to the order of Cruciferæ, which signifies cross-bearing. There are six stamens, four of which are longer than the others. The seed-pod is composed of three pieces, two of which are called the valves, and open naturally when the seed is ripe. The valves are separated by a thin membrane or dissepiment, to which the seeds are attached. The seeds themselves contain no albumen, being entirely filled up with the embryo, the cotyledons, or seed-leaves, of which are folded differently in the different plants; and these differences have been used by modern botanists to form the Cruciferæ into sub-orders. As, however, it requires a microscope to ascertain these peculiarities, I have thought it unnecessary to trouble my readers with them; though I have arranged the genera in tribes.

Linnæus placed all the Cruciferous plants in his Class Tetrady namia, which signifies having six stamens, four of which are longer than the others; and the plants contained in this class he divided into two orders, viz., Siliculosa, including those plants which have their seeds in a short pod or silicle, like the Candy-tuft and the Shepherd's Purse; and Siliquosa, including those which have their seeds in a long narrow pod or siliqua, like the Wall-flower and the Cabbage.

Modern botanists arrange the Cruciferæ in sub-orders, distinguished by the position of the cotyledons, and into tribes as enumerated below.

All the plants belonging to the Cruciferæ are wholesome to eat; but some of them are extremely pungent, and nearly all are very greatly improved by cultivation.

## I.—THE WALL CRESS TRIBE.

All the plants in this tribe have a long pod, or siliqua, which opens naturally when ripe. The seeds are oval, compressed, and often with a border round the margin. The partition between the valves of the seed-pod is long and narrow, but somewhat broader than the seeds that lie upon it. The valves themselves are convex.

## GENUS I.

THE STOCK. (MATTHIOLA, *R. Brown.*)*Lin. Syst. TETRADYNAMEA SILIQUOSA.*

GENERIC CHARACTER.—Siliqua taper. Stigma connivent, thickened, or connate at the back. Calyx with two sacs at the base. | Seeds compressed, in one row, generally bordered. Cotyledons flat. (Dec.)

DESCRIPTION, &c.—Two species of Stock are occasionally found wild in Great Britain, but only one of them appears to be a true native. The other (the common Queen's Stock) has only been found wild on the cliffs near Hastings, in Sussex, where its seeds had most probably been conveyed by some accidental circumstance. When this genus was separated from Cheiranthus, the name of Matthiola was given to it, in honour of an Italian physician named Matthioli. The difference between the two genera lies in the stigma, which in Matthiola is sessile, and Cheiranthus is supported by a style.

1.—THE GREAT SEA-STOCK. (MATTHIOLA SINUATA, *R. Brown.*)SYNONYMS.—*Cheiranthus sinuatus, Lin.*; *C. tricuspidatus, Huds.*

ENGRAVINGS.—Eng. Bot., t. 462; 2d ed., t. 948; and our fig. 5. | SPECIFIC CHARACTER.—Stem herbaceous, spreading. Leaves downy, glandular, obtuse, sinuated; those of the branches undivided. Pods rough, with prominent glands. (Smith.)

DESCRIPTION, &c.—This plant, though it is said not to be truly indigenous, has been so long naturalised on the sandy sea-shores of Wales and Cornwall, as to have all the appearance of a British plant. It is large and robust, growing to the height of two feet or more, and spreading in proportion. The leaves are covered with a white starry pubescence, and are rather succulent; the lower ones are sinuated on each side, which is the origin of the specific name. The plant is a biennial, and it flowers from May to August.

THE SHRUBBY, OR QUEEN'S STOCK. (M. INCANA, *Smith.*)

This species is the common Stock-Gillyflower, or July flower, of our gardens. Its flowers are purple, and it is extremely fragrant, remaining in flower nearly all the summer.

“The white and purple Gillyflowers that stay  
In blossom—lingering summer half away.”—CLARE.

It has never been found growing wild in England in any place but the cliffs near Hastings, but there it takes a decidedly shrubby character. It is very common in gardens, and no flower is more improved by cultivation.

## GENUS II.

THE WALL-FLOWER. (CHEIRANTHUS, *Lin.*)*Lin. Syst. TETRADYNAMEA SILIQUOSA.*

GENERIC CHARACTER.—Siliqua taper, or compressed. Stigma two-lobed, or capitate. Calyx with two sacs at the base. Seeds in one row, ovate, compressed. (Dec.)

DESCRIPTION, &c.—Only one species of this genus is wild in Britain. The Stocks were formerly included in it; but they have been separated on account of the difference in the formation of the stigma. The name of Cheiranthus is said to be derived from an Arabic word applied to a kind of stock, and signifying fragrant. Wall-flower alludes to the general habits of the plant, which grows more luxuriantly on old walls than in any other situation.

1.—THE COMMON WALL-FLOWER. (CHEIRANTHUS CHEIRI, *Lin.*)SYNONYME.—*C. fruticulosus, Smith.*

ENGRAVINGS.—Eng. Bot., t. 1934; 2d ed., t. 946.

SPECIFIC CHARACTER.—Leaves lanceolate, acute; most hoary beneath,

with simple close hairs. Stem shrubby. Branches angular. Style prominent. (*Smith.*)

DESCRIPTION, &c.—The wild Wall-flower is easily known by its resemblance to the garden varieties, though it is easily distinguished from them by its being of a pure yellow, and by its single flowers being remarkably fragrant; as Clare says,

“ The single Wall-flowers have a luscious smell—  
Old-fashioned flowers which housewives love so well.”

The plant is said not to be a true native of Britain; but whether that be the case or not, it has become so thoroughly naturalised, that there is scarcely a ruin in England that has not some of it growing on its walls. It takes its name of Wall-flower, indeed, as I have already observed, from this peculiarity; and it is certainly extremely ornamental in such situations. The following lines by Bernard Barton, addressed to Leiston Abbey, give a beautiful picture of the effect of the Wall-flowers on that ruin:—

“ The mantling ivy's ever verdant wreath,  
She gave thee as her livery to wear;  
Thy wall-flowers, waving at the gentlest breath,  
And scattering perfume on the summer air,  
Wooing the bee to come and labour there.

The clinging moss, whose hue of sober grey  
Makes beautiful what else were bleak and bare;  
These she has given thee as a fit array  
For thy declining pomp, and her increasing sway.”

The Wall-flower is as great a favourite as a garden flower as the Stock, and it is almost as much improved by cultivation. Few flowers, indeed, are more valuable in gardens, as it continues in blossom nearly all the summer, and it has not only a gay and cheerful appearance, but a most delightful fragrance. In many country places it is considered a sign of good luck to receive a present of Wall-flowers on a birthday; but notwithstanding this superstition, the plant cannot be said to be a favourite with the poets, though it has had the honour of being celebrated by Moir, the well-known Delta of Blackwood's Magazine.

“ The Wall-flower—the Wall-flower,  
How beautiful it blooms;  
It gleams above the tower,  
Like sunlight over tombs;  
It sheds a halo of repose  
Around the wrecks of Time:—  
To beauty give the flaunting Rose,  
The Wall-flower is sublime.

Flower of the solitary place!  
Grey ruin's golden crown!  
That lonest Melancholy grace  
To haunts of old renown;  
Thou mantlest o'er the battlement,  
By strife or storm decay'd;  
And fillest up each envious rent  
Time's canker-foot hath made.

In the season of the tulip eup,  
When blossoms clothe the trees,  
How sweet to throw the window up,  
And scent thee on the breeze.  
The butterfly is then abroad,  
The bee is on the wing,  
And, on the Hawthorn by the road,  
The linnets sit and sing.

Rich is the Pink, the Lily gay;  
The Rose is summer's guest;  
Bland are thy charms, when these decay,—  
Of flowers—first, last, and best!  
There may be gaudier on the bower,  
And stately on the tree;  
But Wall-flower—loved Wall-flower!  
Thou art the flower for me!”

## GENUS III.

THE WATER-CRESS. (NASTURTIUM, *R. Brown.*)*Lin. Syst.* TETRADYNAMIA SILIQUOSA.

GENERIC CHARACTER.—Siliqua nearly taper, shortened, or declinate. Stigma almost two-lobed. Calyx equal at the base, spreading. Seeds small, irregularly attached in two rows, not bordered. (Dec.)

DESCRIPTION, &c.—The common Water-cress is easily known by its leaves, and, indeed, it is seldom permitted to flower, as the young shoots are generally gathered for the table, as fast as they unfold. The flowers, when they do appear, are small and white, but inconspicuous. There are three other species of this genus, all of which have yellow flowers. One of these, the creeping Wood-Cress, (*N. sylvestris*,) is rather pretty, from the great number of its bright yellow flowers. This species is easily known from the others by its creeping stem, the deeply-cut leaflets of its pinnate leaves, and its zigzag racemes of flowers, the latter peculiarity being most striking when the plant is in seed. The name of Nasturtium is said to be derived from two Latin words, *Nasus tortus*, a twitched-up nose, from the effect supposed to be produced on the countenance by the acrid and pungent qualities of these plants when eaten. The garden Nasturtium is so called, from its stem and leaves tasting like the Water-Cress, though it does not bear any botanical relationship to that plant. Culpeper recommends the Water-Cress as a good remedy to cleanse the blood in spring, and to “consume the gross humours winter hath left behind.” He also says that the juice of the herb, if it be “mixed with vinegar, and the fore-part of the head bathed therewith, is very good for those that are dull and drowsie, or have the Lethargy.”

## GENUS IV.

THE WINTER-CRESS. (BARBAREA, *R. Brown.*)*Lin. Syst.* TETRADYNAMIA SILIQUOSA.

GENERIC CHARACTER.—Siliqua with four angles, slightly compressed : the valves not pointed at the apex, concave, keeled. Calyx equal at the base. (Dec.)

DESCRIPTION, &c.—There are only two species of this genus, and the handsomest is by far the most common. The plant was formerly dedicated to St. Barbara, and hence the name.

1.—THE COMMON WINTER-CRESS, OR WINTER ROCKET. (BARBAREA VULGARIS, *R. Brown.*)SYNONYMS.—*Erysimum Barbarea*, *Lin.* ; Bellcisle Cress.ENGRAVINGS.—*Eng. Bot.*, t. 443 ; 2d ed., t. 933.SPECIFIC CHARACTER.—Lower leaves lyrate, the terminal lobe roundish ; upper obovate, toothed. (*Smith.*)

DESCRIPTION, &c.—This species is well known, as it is common on hedge-banks and road-sides in every part of England. The leaves are of a very dark shining green, and strongly veined. The flowers are of a bright golden yellow, and are produced in great abundance. The yellow Rocket, a well-known garden flower, is only a double flowered variety of this species. The wild plant is a perennial, and grows from one to three feet high, according to the nature of the soil.

2.—THE EARLY WINTER-CRESS. (B. PRÆCOX, *Smith.*)

This plant has very small flowers and remarkably long seed-pods. It is found wild occasionally by road-sides and ditches ; but it is supposed not to be a true native. It is cultivated in the kitchen garden, and frequently used as a spring salad.



1 Coral-root 2 Common Lady's Smock. 3 Bitter-Cress.  
4 Common Rock-Cress 5 Great Sea-Stock.



## GENUS V.

THE TOWER-MUSTARD. (TURRITIS, *Lin.*)*Lin. Syst.* TETRADYNAZIA SILIQUOSA.

GENERIC CHARACTER.—Siliqua linear; the valves flat. Seeds in two rows in each cell. Flowers white or whitish. (Dec.)

DESCRIPTION, &c.—There is only one species of this genus a native of Britain, and it has no beauty to recommend it. The flowers are very small, and of a pale straw-colour. The leaves are long and of a glaucous green, and the seed pods, which are very long, stand erect. *Turritis glabra*, the only British species, is common on the hedge-banks and road-sides in Norfolk and Suffolk; but it is rarely found in any other part of the kingdom. The name of Turrita signifies a tower, and it is applied to this plant from the tower-like form of its stem and pods. The seeds, which are sharp in taste, and smell of garlic, were formerly supposed to be an antidote for poison.

## GENUS VI.

THE ROCK, OR WALL-CRESS. (ARABIS, *Lin.*)*Lin. Syst.* TETRADYNAZIA SILIQUOSA.

GENERIC CHARACTER.—Siliqua linear; valves flat, with a single rib in the middle. Seeds in one row in each cell, oval or orbicular, compressed. Cotyledons flat. Flowers white, unfrequently pink. (Dec.)

DESCRIPTION, &c.—The plants included in this genus are always found, when growing wild, attached either to a wall or a rock, and hence their popular English names. They are rarely found growing in hot climates; though the name of *Arabis* is said to be derived from Arabia, because one of the species is very common in that country.

1.—THE COMMON WALL-CRESS. (ARABIS TURRITA, *Smith.*)SYNONYMES.—*A. umbrosa*, *Crantz*; Tower Wall-Cress.

ENGRAVINGS.—Eng. Bot., t. 178; 2d ed., t. 931.

SPECIFIC CHARACTER.—Leaves toothed, clasping the stem. Flower

stalks the length of the calyx, each with a leafy bracte. Pods linear, flat, thick-edged, recurved in one direction. (*Smith.*)

DESCRIPTION, &c.—This is one of the prettiest species of the genus, though even it is not very remarkable for its beauty, its long horn-like pods appearing at the same time as its flowers. It is found very abundantly on the walls of some of the Colleges at Oxford, and in a few places in Scotland. It is a biennial, flowering in May. The pods grow erect, and form a kind of wall round the stem, so as to bear some resemblance to a turret.

2.—THE COMMON ROCK-CRESS. (ARABIS PETRÆA, *Hook.*)SYNONYMES.—*Cardamine petraea*, *Huds.*; *C. hastulata*, *Smith*; *Arabis hispida*, *Linn.*; *A. Crantziana*, *Willd.*; Stone Cress.ENGRAVINGS.—Eng. Bot., t. 469; 2d ed., t. 928; and our *fig. 4*, in Pl. 9.

SPECIFIC CHARACTER.—Radical leaves hastate or lyrate, smooth or bristly, tufted; stem-leaves lanceolate, entire, scattered, mostly smooth.

Petals spreading. Root branched at the crown. (*Smith.*)

DESCRIPTION, &c.—This plant is found in moist places in various parts of North Wales and in Scotland, always growing among rocks. The flowers are purplish, and, though small, they are very pretty. The leaves grow in tufts, springing from the crown of the root. The plant is a perennial, and it flowers in June and July.

THE BRISTOL ROCK-CRESS. (*A. STRICTA, Smith.*)

This is rather a rare plant, being only found on St. Vincent's Rocks at Clifton, and at a few other places in the neighbourhood of Bristol. The leaves are of a deep glossy green above, and purple beneath. The flowers are cream-coloured, and rather pretty, but they rarely open. The plant is a perennial, and it flowers in March.

THE FRINGED ROCK-CRESS. (*A. CILIATA, Smith.*)

This species has only been found at Cunnamara in Ireland, and near Loch Lea in Scotland. The flowers are small and white ; and the plant is a biennial, flowering in July.

THE HAIRY WALL-CRESS. (*A. HIRSUTA, Smith.*)

This species is frequently met with on walls, rocks, and dry banks, in many parts of England and Scotland. The flowers, which are produced in June, are small and white ; and the seed pods, which are very numerous, stand erect around the stem.

## GENUS VII.

THE LADY-SMOCK, OR BITTER-CRESS. (*CARDAMINE, Lin.*)

*Lyn. Syst. TETRADYDAMIA SILIQUOSA.*

GENERIC CHARACTER.—Siliqua linear ; valves flat, nerveless, usually dehiscing with elasticity. Seeds ovate, not bordered ; umbilical cords slender. (*Dec.*)

DESCRIPTION, &c.—These plants are generally found in marshy situations, and always in rather cool climates. They were formerly employed in medicine as an anti-scorbutic, and they are still occasionally used in the country in salads, to which they give an agreeable flavour. The name of Cardamine is said to be derived from two Greek words, signifying to fortify the heart, from the supposed strengthening properties of the plants. The origin of the English name is unknown, but it is supposed to arise from the common species growing in meadows so abundantly as to look like linen lying to bleach, when seen from a little distance.

1.—THE COMMON LADY-SMOCK, OR CUCKOO-FLOWER. (*CARDAMINE PRATENSIS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 776 ; 2d ed., t. 925 ; and our *fig. 2*, in Pl. 9. the radieal ones roundish and toothed ; those of the stem-leaves lanceolate, entire. Petals with a tooth upon the claw. (*Smith.*)

SPECIFIC CHARACTER.—Leaves pinnate, without stipulas ; leaflets of

DESCRIPTION, &c.—This is a very handsome species ; the flowers are purplish when they first appear, but when bleached with the sun they become of a silvery whiteness. Few plants are more common, as there is scarcely a meadow in the kingdom in which this flower is not seen in the month of May ; but it grows most abundantly where the ground is rather moist. Clare, who was so pre-eminently the poet of nature, thus describes this plant :—

“ The wan-hued Lady-Smocks, that love to spring,  
Near the swamp margin of some plashy pond,  
Amid the blooms that early Aprils bring.”

The stem of the common Lady-Smock generally grows about a foot high, and the leaves are pinnate. The leaflets sometimes throw out roots and produce new plants. The plant is a perennial, and there is a double-flowered variety of it cultivated in gardens. The points of the shoots, before the expansion of the flower-buds, were formerly much used in medicine, and they are still said to be very efficacious in cases of epilepsy.

2.—THE BITTER-CRESS. (*CARDAMINE AMARA, Smith.*)

ENGRAVINGS.—Eng. Bot., t. 1000; 2d ed., t. 926; and our *fig. 3*, in Pl. 9.

the lowermost roundish; of the rest toothed or angular. Stem creeping at the base. Style obliquely elongated. (*Smith.*)

SPECIFIC CHARACTER.—Leaves pinnate, without stipulas; leaflets of

DESCRIPTION, &c.—This plant is generally found growing in ditches, or on the margins of rivulets or ponds. When it is found in an open meadow, it is a sign that the ground is marshy. The flowers bear considerable resemblance to those of the last species in their form; but they differ decidedly in colour, as they have a yellowish tinge, and never the slightest shade of pink, or purple. It is a very handsome perennial plant, and it flowers in April and May.

THE ALPINE CRESS. (*C. BELLIDIFOLIA, Smith.*)

This is a very doubtful native. It is common on the Alps of Switzerland; but it has only been found in two places in the British Isles, viz., one in Scotland, and one in Ireland. It is a pretty little dwarf plant, growing in tufts; and when neither in flower nor seed, it very much resembles a Daisy.

THE NARROW-LEAVED BITTER-CRESS. (*C. IMPATIENS, Smith.*)

This species is very common in moist shady places in Derbyshire, Westmoreland and Cumberland. The flowers are very small and inconspicuous; but the valves of the ripe seed-pods fly back with great force when touched, and scatter the seeds to a considerable distance. The plant is an annual, and it flowers in May and June.

THE HAIRY BITTER-CRESS. (*C. HIRSUTA, Lin.*)

This is an annual of no beauty, flowering from March to June, and growing in moist and shady places in almost every part of the kingdom.

## GENUS VIII.

THE CORAL-ROOT. (*DENTARIA, Lin.*)*Lin. Syst. TETRADYNAZIA SILIQUOSA.*

GENERIC CHARACTER.—Siliqua lanceolate; valves flat, without ribs, often dehiscing with elasticity; placentæ not winged. Umbilical cords broad. Seeds ovate, not bordered, in one row. (*Dec.*)

DESCRIPTION, &c.—There is only one species belonging to this genus, a native of Great Britain; but there are several, natives of North America. They have all fleshy or tuberous roots, or rather, underground stems, which are covered with toothlike scales; and hence the botanic name *Dentaria*, which is derived from *dens*, a tooth. The name of Coral-root, or Coral-wort, also alludes to the underground stem, which, in the British species, is much branched, and, when dry, bears considerable resemblance to coral. The flavour of all the plants belonging to this genus is extremely pungent; and a white-flowered species, which is common in America, is known in that country by the name of Pepper-wort. The underground stems are also used in America, when ground, instead of mustard.

1.—THE COMMON CORAL-ROOT. (*DENTARIA BULBIFERA, Lin.*)

SYNONYMES.—*Cardamine bulbifera, Br.*; Coral-wort.

ENGRAVINGS.—Eng. Bot., t. 309; 2d ed., t. 921; and our *fig. 1*, in Pl. 9.

SPECIFIC CHARACTER.—Lower leaves pinnated; upper simple, with

axillary bulbs. (*Lindley.*)

DESCRIPTION, &c.—This species is found in various parts of Sussex and Middlesex, and among the rocks at Tonbridge Wells. It has also been found on the banks of the Esk, near Dalkeith, in Scotland. It generally

grows in woods and shady places; but it is by no means common, and even when seen, it might easily be mistaken for the British species of Stock. There is, however, an important difference, which is, that there is generally a little bulb formed in the axil of each leaf, which will become a plant if removed to the earth. The underground stem, also, is decidedly different from that of every other kind of Cruciferous plant.

## II.—THE ALYSSUM TRIBE.

The plants belonging to this division have a short pod or silicle, which opens longitudinally when ripe, and has flat or concave valves, the partition between which is broad, oval and membranous. The seeds are compressed and often bordered.

### GENUS IX.

#### THE SWEET ALYSSUM. (GLYCE, *Lindl.*)

*Lin. Syst.* TETRADYNAZIA SILICULOSA.

GENERIC CHARACTER.—Silicula nearly ovate; valves flattish; cells one-seeded; the umbilical cords adhering by the base to the septum. | Seeds usually bordered. Calyx spreading. Petals entire. Hypogynous glands eight. Filaments not toothed. (*R. Brown.*)

DESCRIPTION, &c.—There is only one species in this genus, and that is the common Sweet Alyssum of the gardens, a plant which has had a great many botanical names, the last of which, given to it by Dr. Lindley, is Glyce; and is, I suppose, derived from the Greek word *Glykys*, signifying sweet. The plant was called the Sweet Alyssum from its being formerly included in the genus Alyssum or Madwort; and being the only fragrant species; the flowers having a peculiarly sweet, and honey-like smell.

#### 1.—THE COMMON SWEET ALYSSUM. (GLYCE MARITIMA, *Lindl.*)

|                                                                                                                                                                                                                     |                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| SYNONYMES.— <i>Alyssum maritimum</i> , <i>Willd.</i> ; <i>A. minimum</i> , <i>Lin.</i> ; <i>A. halimifolium</i> , <i>Ait.</i> ; <i>Koniga maritima</i> , <i>R. Brown</i> ; <i>Clypeola maritima</i> , <i>Smith.</i> | ENGRAVINGS.—Eng. Bot., t. 1729; 2d ed., t. 919.                                                             |
|                                                                                                                                                                                                                     | SPECIFIC CHARACTER.—Stem procumbent, suffruticose. Leaves lanceolate-linear, acute, entire. ( <i>Lin.</i> ) |

DESCRIPTION, &c.—This plant is well known in gardens, where it is generally treated as an annual, though in a state of nature it becomes shrubby, or at least suffruticose. It is found wild on cliffs and in stony places in various parts of Devonshire and Cornwall, and also near Aberdeen in Scotland. The flowers are white, and are in long, close, terminal, erect racemes. It has been already observed that the flowers are very fragrant, and it may be added that they continue in blossom from July to September. The plant grows in any soil and situation, however inland it may be; though the wild plant is never found at any great distance from the ocean.

### GENUS X.

#### THE WHITLOW-GRASS. (DRABA, *Lin.*)

*Lin. Syst.* TETRADYNAZIA SILICULOSA.

GENERIC CHARACTER.—Silicula sessile, oval or oblong; valves flat or convex. Seeds numerous, not margined. Calyx equal. Petals entire. All the stamens without teeth. (*Dec.*)

DESCRIPTION, &c.—The plants belonging to this order are generally small and insignificant; but most of the kinds are abundant in every part of Great Britain. The common Whitlow-Grass (*Draba verna*) has been separated from the others by some botanists, and made a new genus under the name of *Erophila*, on account



1 Yellow Willow Grass. 2 Sea Rocket.  
3 Mithridate Mustard 4 Common Scurvy Grass



of its petals being cloven to the base; while those of the other species of *Draba* are entire, or, at most, only slightly notched. The name of *Draba* is derived from a Greek word signifying acrid, in allusion to the properties of the plant; and Whitlow-Grass has reference to the leaves being considered extremely efficacious in curing Whitlows, by drawing them to a head.

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1.—THE COMMON WHITLOW-GRASS. (*DRABA Verna*, *Lin.*)

SYNONYME.—*Erophila vulgaris*, *Dec.*

ENGRAVINGS.—Eng. Bot. t. 586; 2nd ed., t. 914.

SPECIFIC CHARACTER.—Leaves lanceolate, hairy, slightly toothed.

Scapes naked. Petals deeply cloven. (*Smith.*)

DESCRIPTION, &c.—This little plant is an annual, which is common in every part of Great Britain. It flowers in March and April; and it was from its time of flowering that De Candolle gave the new genus, of which it is the type, the name of *Erophila*, or Lover of the Spring. The flower and seed-pod wither away as soon as the seed is ripe and has burst from the pod; but the dry flower-stalks, with the membranous partitions of the seed-vessels, remain, and have a very curious appearance nearly all the summer. The flowers are very small and white, and the raceme is zigzag. The leaves form a tuft, growing only from the crown of the root.

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2.—THE YELLOW WHITLOW GRASS. (*DRABA AIZOIDES*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1271; 2nd ed., t. 915; and our *fig.* 1., in Pl. 10.

notched, twice the length of the calyx. Leaves lanceolate, rigid, keeled, fringed. (*Smith.*)

SPECIFIC CHARACTER.—Stalks solitary, naked. Petals slightly

DESCRIPTION, &c.—This is a beautiful little rock plant which grows wild on walls and rocks in South Wales, and some other parts of Great Britain. The plant is branched from the root, and grows in dense moss-like tufts. The leaves are crowded together, and placed like scales in a pyramidal form. The flower-stalks are from one to two inches long, and one springs from the centre of each tuft of leaves. The leaves are evergreen, and curiously fringed; and the flowers, which are of a rich golden yellow, appear in March and April.

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THE ROCK WHITLOW-GRASS. (*D. RUPESTRIS*, *R. Br.*)

This species is found occasionally on the mountains in Scotland. It is a dwarf perennial plant, seldom growing more than two inches high. The flowers are white, and they appear in May and June.

THE GREY, OR TWISTED-PODDED WHITLOW-GRASS. (*D. INCANA*, *Smith.*)

This species is common on lime-stone rocks in every part of Great Britain, and it varies from a few inches to more than a foot in height. The flowers are small and white, and the seed pods curiously twisted.

THE WALL, OR SPEEDWELL-LEAVED WHITLOW-GRASS. (*D. MURALIS*, *Smith.*)

This plant grows wild on lime-stone rocks and old walls in various parts of the kingdom. It is an annual, with small white flowers, which appear in April and May.

## GENUS XI.

THE SCURVY-GRASS. (COCHLEARIA, *Lin.*)*Lin. Syst. TETRADYNAMIA SILICULOSA.*

GENERIC CHARACTER.—Silicula sessile, ovate, globose, or oblong; valves ventrieose. Seeds numerous, not bordered. Calyx equal, spreading. Petals entire. Stamens not toothed. Flowers white. Leaves usually fleshy. (Dec.)

DESCRIPTION, &c.—The plants belonging to this genus have received their somewhat singular botanic name of Cochlearia from the spoon-like curve of their leaves. The English name of Scurvy-Grass alludes to the supposed anti-scorbutic properties of the common species. The Horse-Radish belongs to this genus.

1.—THE COMMON SCURVY-GRASS. (COCHLEARIA OFFICINALIS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 551; 2nd ed., t. 908; and our fig. 4, | SPECIFIC CHARACTER.—Radical leaves roundish; those on the stem in Pl. 10. | oblong and somewhat sinuated. Silicula globose. (Smith.)

DESCRIPTION, &c.—This is an annual plant, growing on the sea coast of the South of England in great abundance, but almost always in muddy situations. The leaves are roundish and fleshy, with an agreeable flavour of salt when eaten. They were formerly much esteemed as an anti-scorbutic, and their juice was used as a cosmetic to clear the skin from all spots or other marks. Even at the present time the leaves are often mixed with salads, and they are both agreeable and wholesome when eaten with bread and butter at breakfast, in the same manner as Water Cresses. The Greenland Scurvy-grass (*C. grænlandica*, Smith,) which is met with occasionally on the sea shore in Scotland, and very frequently on the Highland mountains, is supposed by some botanists to be only a dwarf variety of the common kind though others make it a distinct species.

2.—THE ENGLISH SCURVY-GRASS. (COCHLEARIA ANGLICA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 552; 2nd ed., t. 910. | stem sessile, lanceolate, and toothed. Silicula elliptical, strongly SPECIFIC CHARACTER.—Radical leaves ovate, entire; those on the | reticulated with veins. (Smith.)

DESCRIPTION, &c.—This is, perhaps, the handsomest species of the genus, as its flowers are large, and of a brilliant white; while its leaves are small and rather delicately formed. It is common in muddy places by the sea shore in every part of Great Britain, and it is also met with occasionally on the summits of mountains. It bears considerable resemblance to the common species, except in its leaves being smaller, and its flowers larger; and, as these vary exceedingly, it would sometimes be very difficult to distinguish between the two species, if it were not for the seed pod; which, in the English Scurvy-grass, is very distinctly and conspicuously veined, but in the common Scurvy-grass is quite smooth and plain.

3.—THE DANISH SCURVY-GRASS. (COCHLEARIA DANICA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 696; 2nd ed., t. 911.

SPECIFIC CHARACTER.—Leaves all triangular and stalked. Silicula elliptical, reticulated with veins. (Smith.)

DESCRIPTION, &c.—This plant is principally distinguished from the last by its dwarf habit, its spreading stems, and its ivy-shaped leaves. The flowers and seed pods are also much smaller than those of the English Scurvy-grass, though the seed pods are veined in the same manner. The plant is an annual, and it flowers in May and June. There is a variety with entire leaves.

THE HORSE-RADISH. (C. ARMORACIA, *Lin.*)

This well-known plant is supposed to be not a true native; though it has been found growing wild in England for centuries. It, however, rarely flowers, and still more rarely perfects its seeds; though no plant can be more readily propagated by the root. It is, indeed, extremely difficult to clear the ground of it when it has been once planted, as it will continue coming up in various places, wherever the smallest portion of the root has been left in the soil.

## III.—THE PENNY-CRESS TRIBE.

Seed-pod a silicle; partition very narrow; valves keeled-shaped. Seeds oval, sometimes bordered.

## GENUS XII.

THE PENNY-CRESS. (THLASPI, *Lin.*)

*Lin. Syst.* TETRADYNAZIA SILICULOSA.

GENERIC CHARACTER.—Silicula emarginate; valves navicular, winged at the back; cells two or many-seeded. Petals equal. Calyx equal at base. (*Dec.*)

DESCRIPTION, &c.—This is a genus entirely composed of weeds with inconspicuous white flowers. They are only found in the Northern Hemisphere, and are not very abundant anywhere. The name of Thlaspi is said to be derived from a Greek word, signifying to flatten, in allusion to the shape of its seed vessels.

1.—THE MITHRIDATE MUSTARD. (THLASPI ARVENSE, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1659; 2nd ed., t. 897; and our *fig.* | SPECIFIC CHARACTER.—Silicula orbicular, nearly flat, shorter than 3, in Pl. 10. | its stalk. Leaves smooth, oblong, toothed. Stem erect. (*Smith.*)

DESCRIPTION, &c.—This plant is more ornamental in the seed-pod than in the flower, and, indeed, it is generally in the former state that it is met with, as the flowers remain on a very short time, while the seed-pods are of very long duration. The seed-pods are, indeed, very curiously formed; the pod itself resembling two boats fixed together, with their keels projecting, and being furnished with a large wing on each side. The plant is an annual, and grows generally by the road-side, or on old walls, or in unfrequented streets; but it is much less common now than it was formerly. The seeds are very sharp and pungent in their taste, and they were frequently used as a substitute for mustard by country people a century ago. They were also firmly believed to be an antidote against poison; and hence the name of Mithridate Mustard, from the old fable of its being impossible to poison Mithridates, from his skill in making antidotes. The plant possessing no beauty, it has never been cultivated in gardens.

2.—THE COMMON PENNY-CRESS. (THLASPI PERFORIATUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 2354; 2nd ed., t. 898. | heart-shaped, rather sharp at the base, clasping the branched stem. SPECIFIC CHARACTER.—Silicula inversely heart-shaped. Stem-leaves | Style very short. (*Smith.*)

DESCRIPTION, &c.—The perforate leaves of this species readily distinguish it from the Mithridate Mustard. The seed vessels are also much smaller and less ornamental. It is only found in limestone districts, and it generally grows in stone-pits. It is an annual, flowering in April and May, about six weeks earlier than the preceding species.

3.—THE ALPINE PENNY-CRESS. (*THLASPI ALPESTRE*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 81; 2nd ed., t. 899.

Style prominent beyond the margin of the obovate abrupt silicula.  
SPECIFIC CHARACTER.—Stem-leaves arrow-shaped. Stems simple. (Smith.)

DESCRIPTION, &c.—This species is perhaps the most common of any belonging to the genus, as it is found on limestone rocks in every part of Great Britain. The leaves are as glaucous, but more succulent than those of the preceding species, to which it bears considerable resemblance, though it is much handsomer and larger in all its parts. It is a perennial, and flowers in June and July.

All the species belonging to the genus *Thlaspi* are never found but in calcareous soils.

## GENUS XIII.

THE ROCK PEPPER-WORT. (*HUTCHINSIA*, *R. Brown.*)*Lin. Syst.* TETRADYNAZIA SILICULOSA.

GENERIC CHARACTER.—Silicula elliptical. Valves navicular, not winged. Cells two-seeded, seldom many-seeded. Calyx equal. Petals equal. (Dec.)

DESCRIPTION, &c.—There is only one species of this genus, which was formerly included in the genus *Lepidium*, but which has been separated on account of the cells of the seed-pod being two-seeded instead of one-seeded, and there being a difference in the position of the cotyledons in the seed. The name of *Hutchinsia* was given to the genus by Dr. Robert Brown, in honour of Miss Hutchins, a lady residing at Bantry, in Ireland, who paid great attention to the botany of her native country.

1.—THE COMMON ROCK PEPPER-WORT. (*HUTCHINSIA PETREA*, *R. Brown.*)SYNONYME.—*Lepidium petraeum*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 111; 2nd ed., t. 901.

SPECIFIC CHARACTER.—Leaves pinnate, entire. Petals scarcely equal to the calyx. Stigma sessile. Seeds two in each cell. (Smith.)

DESCRIPTION, &c.—This is an exceedingly pretty little plant, seldom growing above two or three inches high, with delicate pinnate leaves, which are beautifully tinted in the autumn, and small white flowers. It is an elegant little plant, growing upon limestone rocks and old walls in various parts of England, particularly in the western counties. It is an annual, and flowers in March and April.

*TEESDALIA NUDICAULIS*, *R. Br.*,

Is another dwarf plant belonging to this division of the Cruciferæ. It was formerly included in the genus *Iberis*, and it is frequently found on sandy banks or heaths. The radical leaves, which are lyre-shaped, grow in a tuft close to the ground, and from them rise a few naked flower-stalks. The plant is an annual, and the flowers appear in May and June.

## GENUS XIV.

THE CANDY-TUFT. (*IBERIS*, *Lin.*)*Lin. Syst.* TETRADYNAZIA SILICULOSA.

GENERIC CHARACTER.—Two exterior petals larger than the others. Silicula much compressed, truncate-emarginate. Seeds ovate, pendulous. (Dec.)

DESCRIPTION, &c.—The genus Candy-tuft is well known by the numerous exotic species of it which are common in our gardens. The only British kind is also occasionally cultivated; but it is very inferior in

appearance to the others. The name of *Iberis* is slightly altered from *Iberia*, the Roman name for Spain, several of the species being natives of that country. Candy-tuft alludes to the first ornamental species cultivated in British gardens having been brought thence from the Island of Candia, and producing tufts of flowers.

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1.—THE BITTER CANDY-TUFT (*IBERIS AMARA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 52; 2nd ed., t. 903.

SPECIFIC CHARACTER.—Stem herbaceous. Leaves lanceolate, acute, partly notched. Flowers in oblong clusters. (*Smith.*)

DESCRIPTION, &c.—The British Candy-tuft is only found in chalky fields, generally in Oxfordshire and Berkshire; and some botanists suppose it not to be a true native, but only escaped from a garden. The flowers are very conspicuous from their brilliant whiteness, but the stems are weak and spreading, and rarely above six inches high.

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IV.—THE SEA-ROCKET TRIBE.

Seed-pod separating transversely into joints with one or two cells, and one or two seeds. Seeds not bordered, that is, without any distinct margin.

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GENUS XV.

THE SEA-ROCKET. (*CAKILE*, *Tourn.*)

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*Lin. Syst. TETRADYNAMIA SILICULOSA.*

GENERIC CHARACTER.—Silicula with two joints, compressed; the upper joint ensiform or ovate. Seeds solitary in each joint; that of the upper erect, of the lower pendulous. (*Dec.*)

DESCRIPTION, &c.—There is only one species in this genus, and that is, the Sea-Rocket so commonly found on the southern coast of England. Cakile is an Arabic word, which has been long applied to this genus.

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1.—THE COMMON SEA-ROCKET. (*CAKILE MARITIMA*, *Willd.*)

SYNONYMS.—*Bunias Cakile*, *Lin.*; *Eruca maritima*, *Fuchs.*

ENGRAVINGS.—Eng. Bot., t. 231; 2nd ed., t. 891; and our *fig. 2*, in Pl. 10.

SPECIFIC CHARACTER.—Joints of the silicula two-edged; the upper

one arrow-shaped. Leaves fleshy, pinnatifid, obtuse. (*Smith.*)

DESCRIPTION, &c.—This species is extremely common on the sea-shore in almost every part of Great Britain; and it is very ornamental from its handsome purple flowers and its free habit of growth. The seed-pods of this plant are very curious, each of them being divided in the middle by a joint into two distinct parts, the upper of which contains a fertile seed, and the lower one a seed which is generally abortive. The leaves are succulent, and are very agreeable to eat. The stem is much branched and spreading, and the flowers are produced in great abundance from June till September. The plant does not appear to have been cultivated in gardens, as it will not flourish unless close to the sea. There is a variety with white flowers, but it is not very common.

## V.—THE HEDGE-MUSTARD TRIBE.

Seed-pod a two-celled siliqua, opening lengthwise; valves concave or keeled. Seeds ovate or oblong, not bordered.

## GENUS XVI.

THE GARDEN-ROCKET, OR DAME'S VIOLET. (HESPERIS, *Lin.*)

*Lin. Syst.* TETRADYNAZMIA SILIQUOSA.

GENERIC CHARACTER.—Siliqua nearly taper, or somewhat four-cornered. Stigmas two, erect, converging. Calyx with two sacs at the base, Seeds oblong, somewhat three-cornered. Stamens without teeth. (Dec.)

DESCRIPTION, &c.—Only one species of this genus has been found wild in England. The name of Hesperis is derived from the Latin word for evening, because the flowers generally become fragrant at night.

1.—THE GARDEN-ROCKET. (HESPERIS MATRONALIS, *Lin.*)

SYNONYME.—*H. inodora*, *Lin.*

Leaves ovate-lanceolate, toothed. Stem upright, slightly branched.

ENGRAVINGS.—*Eug. Bot.*, t. 731; 2nd ed., t. 949.

Pods smooth, irregularly tumid, equilateral, nearly erect. (Smith.)

SPECIFIC CHARACTER.—Partial flower-stalks, the length of the calyx.

DESCRIPTION, &c.—This plant, though suspected not to be a true native, has been found wild in England for nearly three hundred years; and it appears to have been one of the first plants cultivated in gardens. In the feudal times, the garden was generally in the inner court of the castle, it being dangerous to venture beyond the walls; and here the ladies of a baronial family amused themselves by cultivating the few flowers then known, while their husbands or brothers were engaged in war. The *Hesperis matronalis* appears to have been a favourite flower for this purpose, as it is still often found springing wild and neglected among the crumbling walls of a ruined castle; and, hence, its name of Dame's Violet is easily accounted for.

The Sea and Garden-Rockets were formerly much esteemed in medicine; and among the numerous virtues attributed to their seeds, we find that when bruised and mixed with honey they were esteemed an excellent cosmetic, and that when the gall of an ox was added it was believed that they would even remove the marks of the small-pox. Another still more extraordinary quality was attributed to them by Pliny, who says—“ whosoever cheweth the seeds of the Rocket before he is whipped, shall not feel the pains thereof.”

## GENUS XVII.

THE HEDGE-MUSTARD. (SISYMBRIUM, *Lin.*)

*Lin. Syst.* TETRADYNAZMIA SILIQUOSA.

GENERIC CHARACTER.—Siliqua nearly taper, sessile on a torus. Stigmas two, nearly distinct, or combined in a head. Calyx equal at base. Seeds ovate or oblong. Cotyledons flat, incumbent, sometimes oblique. Stamens without teeth. (Dec.)

DESCRIPTION, &c.—All the plants belonging to this genus are weeds which are found in most parts of the world, though most abundantly in the temperate regions. They are all annuals or biennials; and the flowers, which are generally yellow, are small, and without beauty. The name of Sisymbrium is derived from a Greek word signifying fringe; in allusion to the roots, the fibres of which are so fine as to look like fringe.

1.—THE COMMON HEDGE-MUSTARD. (*SISYMBRIUM OFFICINALE, Scopoli.*)SYNONYME.—*Erysimum officinale, Lin.*ENGRAVINGS.—Eng. Bot., t. 735; 2nd ed., t. 939; and our *fig. 2*, in Pl. II.SPECIFIC CHARACTER.—Pods pressed close to the main stalk, awl-shaped, downy. Leaves runcinate, hairy. Stem rough, with reflexed bristles. (*Smith.*)

DESCRIPTION, &c.—This is one of the commonest of the British weeds, and it is easily known by its long spreading flower-stems, which are completely covered with its short, closely-pressed seed-pods, each stem terminating in a cluster of very small yellow flowers. The leaves are very much cut, being sometimes lyrate, and sometimes arrow-shaped, with a terminal lobe, much larger than the others, which often curve backwards towards the stem. The plant is only an annual; but when the leaves are broken off, they show several threads of strong woody fibre, passing through the midrib to the stem.

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THE LONDON ROCKET. (*S. IRIO, Lin.*)

This is a very singular plant, which sprang up in such abundance in London after the great fire of 1666, as to cover the ruins. It is still found occasionally in deserted spots or growing on old walls in London; but it has not as yet been discovered in any other locality. It is very different from the common Hedge-Mustard, from the great length of its seed-pods, and their standing erect apart from the stem, instead of being pressed closely against it. The flowers are small and yellow, and they appear in July and August. The plant is an annual, and when chewed it has the flavour of mustard.

THE FLIXWEED. (*S. SOPHIA, Lin.*)

This species is very common in waste places all over England, particularly among rubbish where lime has been used. The flowers are very small, and have no beauty; but the leaves are finely and delicately cut. The pods are not so long as those of the London Rocket, though they are much longer than those of the common Hedge-Mustard. This plant was formerly very much prized in medicine, particularly in dysentery, or in any disease that requires an astringent. The old herbalists add, that it has the power to consolidate and heal “bones broken or out of joint;” and Culpeper strongly recommends that for its power in curing broken bones alone, syrups, ointments, and plasters of it should be kept in every house.

THE THALE-CRESS. (*S. THALIANUM, Hook.*)

This is a very common plant on walls and cottage-roofs. The flowers are very small and white, and resemble those of an *Arabis*, in which genus, indeed, it is placed by Linnæus. It is an annual, flowering in April and May.

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GENUS XVIII.JACK BY THE HEDGE, OR SAUCE ALONE. (*ALLIARIA, Adanson.*)

Lin. Syst. TETRADYNAMIA SILIQUOSA.

GENERIC CHARACTER.—*Siliqua* nearly taper, somewhat four-cornered, in consequence of its projecting ribs. *Calyx* lax. *Seeds* rather cylindrical. *Cotyledons* linear-oblong, flat. (*Dec.*)

DESCRIPTION, &c.—There is only one British species in this genus, which has been separated from *Erysimum* principally on account of the difference in the formation of its calyx. The name of *Alliaria* signifies garlic, and alludes to the strong smell of the plant.

I.—JACK BY THE HEDGE, OR SAUCE ALONE (*ALLIARIA OFFICINALIS*, *Dec.*)SYNONYME.—*Erysimum Alliaria*, *Lin.*ENGRAVINGS.—Eng. Bot., t. 796; 2nd ed., t. 944; and our *fig.* 1, in Pl. 11.SPECIFIC CHARACTER.—Leaves cordate. Pods prismatical, much longer than the pedicels. (*Dec.*)

DESCRIPTION, &c.—There are few parts of England in which this plant is not to be found; and, in general, it grows in the greatest abundance by the side of every hedge, and in every piece of waste ground. The flowers are white and rather pretty, from the contrast the snowy petals afford to the bright orange anthers. The leaves are luxuriant, and handsomely shaped; and the whole plant smells and tastes so strongly of garlic as to be a very good substitute for it in village cookery, either scalded and chopped small like parsley for sauce, or boiled and served as a vegetable. It is very good dressed as the French dress spinach or sorrel, and served with veal-cutlets or a *fricandeau de veau*. The plant is scarcely ornamental enough in its flowers to deserve cultivation in gardens, but it looks very well in a shrubbery.

## GENUS XIX.

THE TREACLE MUSTARD. (*ERYSIMUM*, *Lin.*)*Lin. Syst. TETRADYNAMIA SILIQUOSA.*GENERIC CHARACTER.—Siliqua four-cornered. Calyx closed. Cotyledons flat, oblong. (*Dec.*)

DESCRIPTION, &c.—The plants belonging to this genus are weeds, which were formerly so highly esteemed in medicine, that they received the name of *Erysimum* from a Greek word signifying to cure.

THE COMMON TREACLE MUSTARD, OR WORM-SEED. (*E. CHEIRANTHOIDES*, *Lin.*)

This plant is a very common weed of no beauty, which was formerly much used in medicine for curing worms, and also for making the celebrated Venice treacle, which was formerly considered a panacea for every disease.

THE HARE'S-EAR TREACLE MUSTARD. (*E. ORIENTALE*, *R. Brown.*)

This is a small plant of no beauty, the leaves of which are somewhat in the shape of a hare's ear, and are folded round the stem. The seed-pods are few in number, but very long. The root of this plant descends so deep into the soil, that it is very difficult to eradicate it.

## VI.—THE GOLD OF PLEASURE TRIBE.

Pod a silicle, with concave valves and an elliptical partition. Seeds ovate.

## GENUS XX.

THE GOLD OF PLEASURE. (*CAMELINA*, *Crantz.*)*Lin. Syst. TETRADYNAMIA SILICULOSA.*GENERIC CHARACTER.—Silicula obovate or roundish. Valves ventricose, dehiscing along with part of the style. Cells many-seeded. Style filiform. Seeds oblong, not bordered. (*Dec.*)

DESCRIPTION, &c.—There is but one species of this genus found wild in England, and that is probably not a true native, as it is only found in flax-fields; and consequently its seeds have been probably imported with the seed of the flax from Germany, in which country it is very abundant. The word *Camelina* signifies dwarf flax.



1. Jack by the Hedge, or Salsify alone. 2. Hedge Mustard. 3. Hoad.



1.—THE COMMON GOLD OF PLEASURE. (*CAMELINA SATIVA*, *Crantz.*)

SYNONYMS.—*Myagrum sativum*, *Lin.*; *Alyssum sativum*, *Smith.* | SPECIFIC CHARACTER.—Silicula obovate, bordered, twice as long as the style. Leaves lanceolate, arrow-shaped. (*Smith.*)

ENGRAVINGS.—Eng. Bot., t. 1254; 2nd ed., t. 920.

DESCRIPTION, &c.—This is a very pretty plant, with bright golden flowers, which, though small, make a brilliant appearance from their great number. In Germany it is cultivated for the oil which is expressed from its seeds; and it has also been recently grown in England for the same purpose. The English name of Gold of Pleasure is supposed to allude to the pleasing effect produced by its golden yellow flowers.

## VII.—THE PEPPER-WORT TRIBE.

Seed-pod a silicle, with a very narrow partition; valves keeled, or very concave. Seeds solitary, or very few; ovate, not bordered.

## GENUS XXI.

THE WART-CRESS. (*CORONOPUS*, *Gærtn.*)

*Lin. Syst.* TETRADYNAMIA SILICULOSA.

GENERIC CHARACTER.—Silicula double. Valves ventricose or slightly carinate, scarcely dehiscing, one-seeded. | threc-cornered. Cotyledons incumbent, linear. Racemes opposite the leaves. Flowers white. (*Dec.*)

DESCRIPTION, &c.—This genus contains only annual weeds, with very small white flowers, and pinnatifid leaves. The name of Coronopus is derived from two Greek words signifying a crow's-foot, in allusion to the shape of the leaves.

THE COMMON WART-CRESS, OR SWINE'S-CRESS. (*C. RUELLII*, *Gærtn.*)

This plant is very common on waste ground and among rubbish in every part of England, but it is comparatively rare in Scotland. The stems grow quite flat upon the ground, and spread in a circular manner round the root. The leaves are very much cut, and the flowers are produced in short racemes, which elongate as the seed-pods form. The seed-pods themselves are very curious, being nearly flat, and plaited on the outside like a ruff, the ends of the plaits projecting beyond the margin so as to form a kind of warted crest; and hence the plants have obtained their English name of Wart-Cress. The flowers are produced from the beginning of May till the end of September.

THE LESSER WART-CRESS. (*C. DIDYMA*, *Smith.*)

This species is found only near the sea-coast in the south of England and Ireland, and in South Wales. The leaves are very pretty from the delicacy of their lobes; but the flowers are very small. The seed-pods are distinctly two-lobed, and they are wrinkled on the outside; but they have not the warted crest which distinguishes the common species.

## GENUS XXII.

THE SHEPHERD'S PURSE. (*CAPSELLA*, *Dec.*)

*Lin. Syst.* TETRADYNAMIA SILICULOSA.

GENERIC CHARACTER.—Silicula triangular, wedge-shaped at the base; valves navicular, apterous; cells many-seeded. Racemes terminal. Flowers white. (*Lindley.*)

DESCRIPTION, &c.—There is only one species in this genus. Capsella is from *capsula*, a little capsule or box.

I.—THE COMMON SHEPHERD'S-PURSE. (CAPSELLA BURSA PASTORIS, *Dec.*)SYNONYME.—*Thlaspi Bursa Pastoris, Lin.*

ENGRAVINGS.—Eng. Bot., t. 1485; 2d ed., t. 900.

SPECIFIC CHARACTER.—Radical leaves more or less pinnatifid; stem-leaves lanceolate-sagittate.

DESCRIPTION, &c.—This is one of the commonest of the British weeds, as it is to be met with everywhere. The flowers are small, and have no beauty; but they continue appearing during the whole of the summer, and are succeeded, as they fall off, by the seed-pods, the shape of which has obtained for the plant its well-known appellation of the Shepherd's Purse. No plant propagates itself more easily than this; the seeds ripen and fall, while fresh flowers are expanding; and as they germinate almost as soon as they reach the ground, new plants spring up, which produce flowers and seeds with such rapidity, that four generations have been watched in a single summer.

## GENUS XXIII.

THE PEPPER-WORT. (LEPIDIUM, *Lin.*)*Lin, Syst. TETRADYNAME SILICULOSA.*

GENERIC CHARACTER.—Silicula ovate, or somewhat cordate; valves keeled, or occasionally ventricose, dehiscing; cells one-seeded. Seeds somewhat triquetrous, or compressed. Racemes terminal. Flowers white. (*Dec.*)

DESCRIPTION, &c.—The plants belonging to this genus differ widely from each other, both in their appearance and in their habit of growth. Some of them are annuals, some perennials, and some undershrubs; some of the species are used as articles of food, such as *L. sativum*, which is the cress used in salads, and *L. oleraceum*, which is cultivated in New Zealand, and used as spinach; while the juice of *L. piscidium* is employed by the natives of the Society Islands for stupefying fish. The name of Lepidium is derived from *lepis*, a scale; in reference, it is said, to the shape of the seed-pods.

THE BROAD-LEAVED PEPPER-WORT, OR POOR MAN'S PEPPER. (L. LATIFOLIUM, *Lin.*)

This species is very abundant in wet shady places near the sea, along the east coast of England and Scotland. It has broad, and somewhat long leaves, of a light bluish green, slightly toothed at the edges, and terminating in a sharp point. The flowers are white, and are produced in long racemes. The plant has a somewhat tuberous underground stem, and both it and the leaves have a sharp, hot, pungent taste like pepper. It was formerly much used in medicine for cases of rheumatism, and it is said still to constitute a principal ingredient in the medicated baths used for the cure of that complaint. This was one of the herbs formerly dedicated to Mars, probably on account of its hot nature.

THE NARROW-LEAVED PEPPER-WORT. (L. RUDERALE, *Lin.*)

This species, which has a very unpleasant smell, is generally found in waste places near the sea, or among calcareous rubbish. The flowers are white, in very small racemes, and the calyx is white-edged. The leaves are glaucous, and somewhat fleshy.

THE MITHRIDATE, OR FIELD PEPPER-WORT. (L. CAMPESTRE, *R. Brown.*)

This species is common in corn-fields, and it is easily distinguished from the other kinds by some curious shining scales on the seed-pods, which are probably the origin of the name of Lepidium being applied to the genus.

THE SMOOTH FIELD PEPPER-WORT. (L. SMITHII, *Hook.*)

This species is very nearly allied to the last, and as, though the pods are generally smooth, they have frequently a few scales upon them, it is probably only a variety. It is, however, said to be a perennial, while the other is only an annual.

THE WHITLOW PEPPER-WORT. (L. DRABA, *R. Brown.*)

This is probably not a true native, as it has only been found in corn-fields, in a few places in the south of England, where its seeds may very probably have been introduced with the corn.

## VIII.—THE WOAD TRIBE.

Seed-pod a one-celled, and one-seeded silicle, which scarcely opens when ripe. The seeds are ovate or oblong.

## GENUS XXIV.

THE WOAD. (*ISATIS, Lin.*)*Lin. Syst. TETRADYNAZIA SILICULOSA.*

**GENERIC CHARACTER.**—Silicula elliptical, flat, one-celled, one-seeded. Valves keeled, navicular, scarcely dehiscing. Seed pendulous, oblong. Flowers small, yellow. (*Dec.*)

**DESCRIPTION, &c.**—There is only one species in this genus, a biennial plant with entire leaves and yellow flowers. The name of *Isatis* is supposed to be derived from a Greek word signifying to make even; but it seems difficult to understand why it should be applied to this plant.

I.—THE DYER'S WOAD. (*ISATIS TINCTORIA, Lin.*)

**SYNONYME.**—*Glastum sativum, Ray.*

**ENGRAVINGS.**—Eng. Bot., t. 97; 2d ed., t. 895; and our fig. 3, in Pl. 11.

**SPECIFIC CHARACTER.**—Radical leaves copiously crenate; those of

the stem entire. Silicula abrupt, smooth, thrice as long as broad. (*Smith.*)

**DESCRIPTION, &c.**—The Woad is a very interesting plant, from its being said to have been used by the Ancient Britons, and from its having been formerly cultivated to a very considerable extent for the sake of a blue dye yielded by its leaves. The ancient Celtic name for the Woad was *Glas*, which Pliny latinised into *Glastum*, and the town of *Glastonbury* is said to take its name from the extensive fields of Woad formerly cultivated in its vicinity. Since the introduction of Indigo, however, the Woad has been very little used, and is now rarely grown except occasionally in gardens where its flowers (which, though small, are of a golden yellow, and are produced in great abundance) form a rich mass of colour, which has a very fine effect when contrasted with the evergreens of a shrubbery. In a wild state, the Woad is generally found on the hedge-banks, and in waste places of corn-fields. It is a branching plant, growing about three feet high, with succulent leaves, and abundance of golden yellow flowers, which are produced in large, branched, terminal racemes.

## IX.—THE CABBAGE TRIBE.

Seed-pod a silique. Seeds globose.

## GENUS XXV.

THE CABBAGE. (BRASSICA, *Lin.*)

*Lin. Syst.* TETRADYNYMIA SILIQUOSA.

GENERIC CHARACTER.—Siliqua with valves dehiscing lengthwise; disseminate linear. Seeds globose. Cotyledons doubled together. (Dec.)

DESCRIPTION, &c.—The plants belonging to this genus are generally so well known in a cultivated state, as to render any detailed description of them unnecessary. As, however, they are very much altered by cultivation, and are rarely seen in blossom in gardens, many persons may be unable to recognise them when they meet with them growing wild. The word Brassica is derived from *Bresic*, the Celtic name of the Cabbage.

1.—THE WILD, OR SEA CABBAGE. (BRASSICA OLERACEA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 637; 2nd ed., t. 952; and our *fig. 1*, in Pl. 12. | waved, lobed, partly lyrate, all perfectly smooth. Pod without a beak. (Smith.)

SPECIFIC CHARACTER.—Roots cylindrical, fleshy. Leaves glaucous,

DESCRIPTION, &c.—This species, which grows in considerable abundance on the rocks and cliffs facing the sea in various parts of England, is the origin of the common garden Cabbage, the Colewort, Savoys and Brussels Sprouts, and, what is still more remarkable, of all the various kinds of Broccoli and Cauliflower common in our gardens. The wild plant is as unlike any of its numerous descendants as can be well imagined. Its stem grows from one to two feet high; the flowers are in a long loose raceme, and of a bright yellow, and the leaves are always deeply cut and generally lyrate, except those of the stem near the flower.

2.—THE ISLE OF MAN CABBAGE. (BRASSICA MONENSIS, *Hudson.*)

SYNONYMES.—*Sisymbrium monense*, *Lin.*; *Diplotaxis saxatilis*, (Dec.) | SPECIFIC CHARACTER.—Leaves glaucous, deeply pinnatifid, nearly smooth; lobes oblong, unequally toothed. Stem simple, smooth.

ENGRAVINGS.—Eng. Bot., t. 962; 2nd ed., t. 953. | Pods quadrangular; beak lodging two or three seeds. (Smith.)

DESCRIPTION, &c.—This very singular species of Cabbage is only found on the sandy sea-shores of the Isle of Man, and on the opposite coasts of England, Ireland, and Scotland. It is a perennial, and produces its large yellow flowers in June and July. Nothing can be imagined much less like a Cabbage than this plant, with its numerous, widely spreading stems, each about a foot long, and its deeply pinnatifid leaves; but probably if it were subjected to cultivation, it might change in as surprising a manner as the other species of the same genus.

RAPE-SEED. (B. RAPUS, *Lin.*)

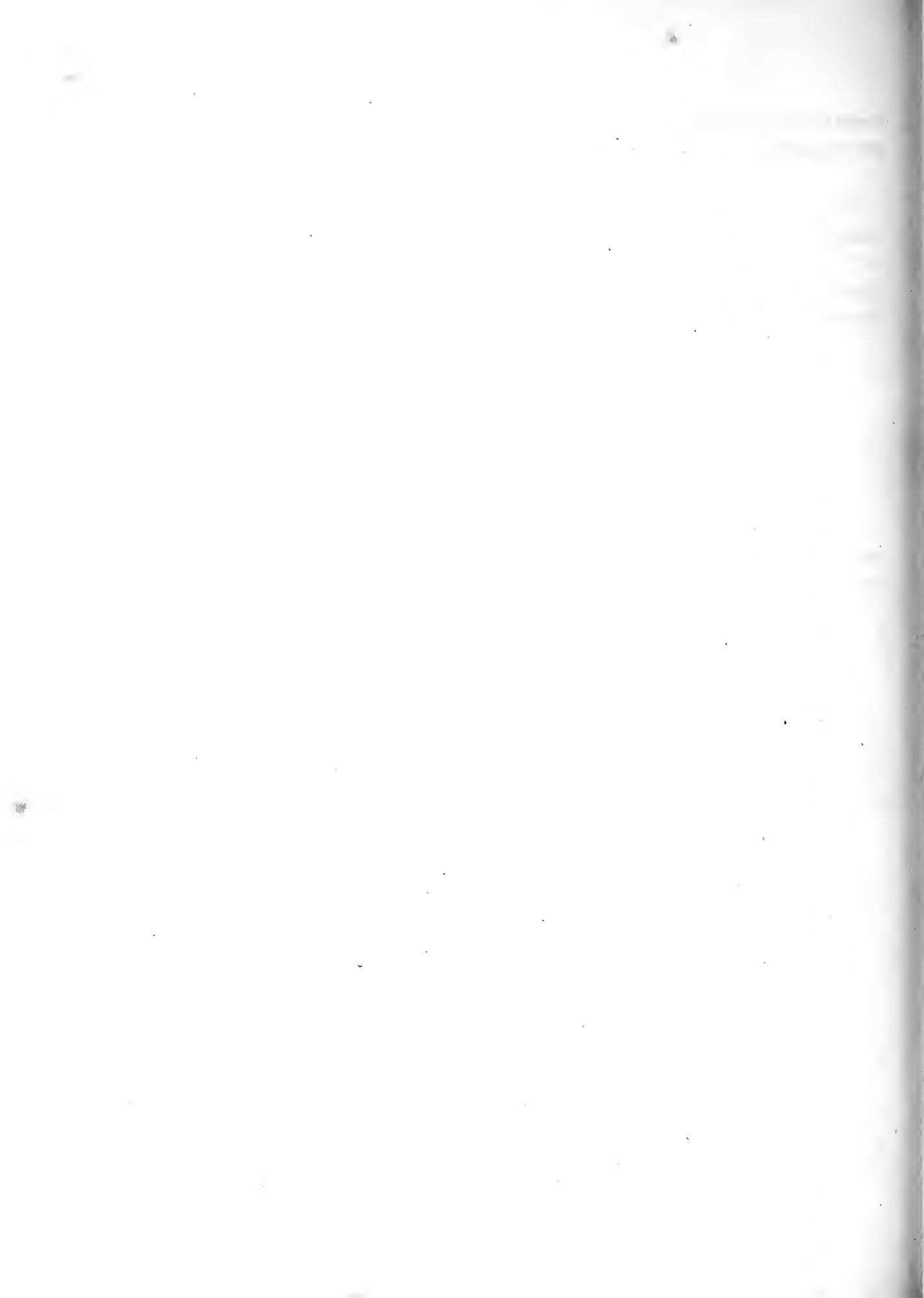
This species is cultivated for the oil expressed from its seeds; the seeds, when crushed, being formed into a substance called oil-cake, which is used in feeding cattle. The leaves are stem-clasping, and of a glaucous hue. The flowers are small, and of a bright yellow. It is a biennial, and common in every part of the kingdom on the banks of ditches and on waste ground.

THE WILD TURNIP. (B. RAPA, *Lin.*)

The flowers of the Wild Turnip are larger than those of the Rape; but in the leaves the two species bear a considerable resemblance to each other. The Turnip is, however, easily distinguished by the thickening at the



1. Wild Cabbage. 2. White Mustard. 3. Sea Kale.



base of the stem, which, in cultivation, forms the turnip. The Turnip is a biennial, and it is found in various parts of England growing wild on hedge-banks and by the road-side.

THE WILD NAVEW. (B. CAMPESTRIS, *Lin.*)

This is one of the handsomest of the Cabbage tribe, and it has large, handsome, deeply-cut leaves, and a strong branching stem covered with bristles towards the lower part; but no one who saw it for the first time could suppose it possible, from the appearance of its woody tap root, that it could be the origin of the Swedish Turnip. The seed-pods are brown when ripe, and the seeds, when crushed and pressed together, form the oil-cake used in feeding dogs, and for various other purposes.

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GENUS XXVI.

THE MUSTARD. (SINAPIS, *Lin.*)

*Lin. Syst.* TETRADYNAZIA SILIQUOSA.

GENERIC CHARACTER.—Siliqua rather taper; valves ribbed. Style small, short, acute. Seeds in one row, roundish. Calyx spreading. Flowers yellow. (Dec.)

DESCRIPTION, &c.—This genus, in its botanical character, is very nearly allied to the last; but it consists only of annual plants. The name of Sinapis is derived from two Greek words signifying to hurt the eye, from the sharp and pungent nature of the plant bringing tears into the eyes.

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1.—THE CHARLOCK. (SINAPIS ARVENSIS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1748; 2nd ed., t. 955. | their own awl-shaped beak. Leaves toothed; partly lyrate, or hastate. SPECIFIC CHARACTER.—Pods with many angles, rugged, longer than | (Smith.)

DESCRIPTION, &c.—This is one of the most troublesome weeds known in British corn-fields; and it is so much detested by the farmer, that in many parts of the country every troublesome weed is called Charlock. The true Charlock, however, is a rough-looking plant, growing about two feet high, and covered with sharp recurved bristles. It is an annual, which is found in every part of England, and flowers in May and June.

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2.—THE WHITE MUSTARD. (SINAPIS ALBA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1677; 2nd ed., t. 956; and our *fig.* | SPECIFIC CHARACTER.—Pods bristly, rugged, spreading, shorter than 2, in Pl. 12. | their own flat two-edged beak. Leaves lyrate. (Smith.)

DESCRIPTION, &c.—The White Mustard generally grows on the road-sides and on waste ground, where it forms a very handsome plant, with bright yellow flowers. The leaves vary very much, but are generally either pinnatifid or of a lyrate form, with the segments very deeply toothed. This species is cultivated in gardens, in order to be used when in its seed-leaves in salads, in company with the garden-cress, *Lepidium sativum*, which is a native of Persia. The seeds of the White Mustard were, about twenty years ago, quite a fashionable medicine, and were considered efficacious in almost every disorder when swallowed whole.

THE BLACK MUSTARD. (S. NIGRA, *Lin.*)

This is the species, the seeds of which, when ground, furnish the mustard used at our tables. The leaves are much larger than those of the white Mustard, and the stem grows three or four feet high instead of rarely

exceeding one foot. The flowers and seed-pods are, however, as much smaller than those of the white Mustard as the stem and leaves are larger. The seed-pods also are pressed close to the stem, instead of spreading. The plant is an annual, and flowers in June.

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### GENUS XXVII.

#### THE SAND ROCKET. (DIPIOTAXIS, *Dec.*)

*Lin. Syst. TETRADYDAMIA SILIQUOSA.*

GENERIC CHARACTER.—Siliqua compressed, linear. Seeds in two rows, ovate. Calyx equal at the base. Flowers yellow or white. Calyxes usually covered with soft down. (*Dec.*)

DESCRIPTION, &c.—There are only two species in this genus, and both were formerly included in *Sinapis*, but have been separated on account of the seeds forming two rows in the seed-pod, instead of one. The two species are: the common Sand Rocket, *D. muralis*, a very small annual weed, which is very abundant in sandy ground near the sea, particularly in the Isle of Thanet; and the Wall Rocket, *D. tenuifolia*, which is a handsome plant with pale yellow flowers, nearly as large as those of the Wall-flower, and glaucous, pinnatifid leaves which are rather fleshy. The whole plant has a very strong smell, which is said to bear some resemblance to that of a Wall-flower at a distance; but to be very disagreeable when close. It is a perennial, and flowers from July to September. The Wall Rocket is very common on old walls in the southern counties of England, and it is said to have been particularly abundant on old London bridge.

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### X.—THE CRESS-ROCKET TRIBE.

Silicle with concave valves opening lengthwise; partition elliptical. Seeds globose.

### GENUS XXVIII.

#### THE CRESS-ROCKET. (VELLA, *Lin.*)

*Lin. Syst. TETRADYDAMIA SILICULOSA.*

GENERIC CHARACTER.—Stamens all distinct. Style ovate, flat, foliaceous. Flowers small, pale-yellow. Siliculae pendulous, with inflexed stalks. (*Dec.*)

DESCRIPTION, &c.—There are only two or three species in this genus; and of these, only one is a native of England. The genus is characterised by the style being dilated or winged, so as to bear some resemblance to the beak of a duck, and this curious style remains on the seed-pod till the seed is ripe. *Veler* is the Celtic name for the Cress.

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#### 1.—THE ANNUAL CRESS-ROCKET. (VELLA ANNUA, *Lin.*)

SYNONYME.—*Carrichtera annua*, *Dec.*

ENGRAVINGS.—Eng. Bot., t. 1442; 2nd ed., t. 896.

SPECIFIC CHARACTER.—Leaves bipinnatifid. Fruit pendulous.  
(*Smith.*)

DESCRIPTION, &c.—This is a very curious little plant; but is a doubtful native, having only been found on Salisbury Plain. The flowers are sometimes white, and sometimes yellow; but the petals are always curiously veined with dark purple. The seed-pods are erect at first, but hang down as the seeds ripen. It flowers in June.

## XI.—THE RADISH TRIBE.

Seed-pod a silicle or a silique, separating transversely into cells or joints. Seeds globose.

## GENUS XXIX.

THE SEA-KALE. (CRAMBE, *Lin.*)

*Lin. Syst.* TETRADYNAZIA SILICULOSA.

GENERIC CHARACTER.—Silicula with two joints, the lower abortive, the upper globose, one-seeded. Cotyledons thick, somewhat foliaceous, deeply emarginate. Flowers white. (Dec.)

DESCRIPTION, &c.—There are several species of this genus, some of which are under-shrubs, but only one is a native of Britain. The name of Crambe is from a Greek word signifying a sea-cabbage.

1.—THE COMMON SEA-KALE. (CRAMBE MARITIMA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 924; 2d ed., t. 892; and our *fig. 3*, situated, wavy, toothed, glaucous, very smooth as well as the stem. in Pl. 12. (Smith.)

SPECIFIC CHARACTER.—Longer filaments toothed. Leaves roundish,

DESCRIPTION, &c.—It is rather a curious fact in the history of culinary vegetables, that this plant, which is now almost exclusively confined to the tables of the rich, was formerly only eaten by the poorest fishermen in the south of England, whose wives and children were in the habit of watching when the shoots and young leaves began to push through the sand on the sea-coast, in the months of March and April, and then gathering them, to be boiled for food. About seventy or eighty years ago, a celebrated physician of that day, Dr. Lettsom, happened to be travelling along the southern coast of England; when, in the neighbourhood of Southampton, he observed some women cutting a plant on the sea-coast, which appeared nearly buried in the sand, but which seemed to him very much like the young shoots of asparagus. He inquired what it was, and was told that it was called sea-kale, and that the poorer classes of fishermen were in the habit of eating it when they were short of other food. The Doctor, finding the shoots succulent, tasted one of them, and liked the flavour so well, that he ordered some of the plant to be sent to the inn, and cooked for his dinner; and he was so well pleased with it, that, on his return to town, he communicated what he justly thought a most valuable discovery, to his friend, Mr. Curtis, the originator of the *Botanical Magazine*, who then kept a nursery in Lambeth-marsh. Mr. Curtis contrived the present mode of cultivating the plant, and after writing a pamphlet in its praise, he sold the seeds in small packets at seven-and-sixpence and ten shillings each. The plant soon became a general favourite, and has continued so ever since; though, contrary to the general habit of cruciferous plants, it has remained totally unchanged by cultivation, except that, in a wild state, the root or underground stem becomes almost woody, and it sends out many spreading branches, which terminate in large showy panicles of snow-white flowers. The leaves are large and glaucous; but they are frequently tinged with a brilliant purple. The plant is a perennial, and it flowers in June.

## GENUS XXX.

THE RADISH. (RAPHANUS, *Lin.*)*Lin. Syst.* TETRADYNAMIA SILIQUOSA.

GENERIC CHARACTER.—Siliqua divided across into many cells, or separating into several pieces. Seeds in one row, globose, pendulous. Cotyledons rather thick, doubled together. (*Dec.*)

DESCRIPTION, &c.—There are only two species of this genus natives of Britain, as the common garden-radish, *R. sativus*, was introduced from China about three hundred years ago. The name of Raphanus is derived from two Greek words signifying to appear quickly, in allusion to the rapidity with which the seeds vegetate when they are put into the ground. The two British species are, the Jointed Charlock, *R. Raphanistrum*, a very troublesome weed closely resembling the common Charlock, or wild Mustard, but easily distinguished by its jointed seed-pod; and the Sea-Radish, *R. maritimus*, a large, coarse-growing, biennial plant, covered with prickles, and having a large fleshy root, almost as pungent as that of the Horse-Radish. The flowers of both species are yellow, with deep purple veins; but they sometimes become blanched after they have been expanded some time.

## CHAPTER VII.

THE VIOLET FAMILY. (VIOLACEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Sepals five, persistent, with an imbricate aestivation, usually elongated at the base. Petals five, hypogynous, equal or unequal, usually with an obliquely convolute aestivation. Stamens five, alternate with the petals, inserted on an hypogynous disk, often unequal; anthers bilocular, bursting inwards, either separate or cohering; filaments dilated, elongated beyond the

appendage or gland at their base. Ovary one-celled, many-seeded or one-seeded, with three parietal placentæ opposite the three outer sepals; style single, usually declinate, with an oblique hooded stigma. Capsule of three valves, bearing the placentæ in their axis. Embryo straight, erect, in the axis of fleshy albumen. Herbaceous plants or low shrubs. Leaves simple, usually alternate, stipulate, entire, with an involute vernation. (*Lindley.*)

DESCRIPTION, &c.—The only genus belonging to this order, which contains British plants, is *Viola*, containing both the Violet and the Heartsease.

## GENUS I.

THE VIOLET. (VIOLA, *Lin.*)*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Sepals unequal, auricled. Petals unequal, the lower spurred. Stamens on the apex of a five-toothed torus; two lower anthers with processes at their back. Capsule three-valved, opening with elasticity. (*Lindley.*)

DESCRIPTION, &c.—This is a small genus of dwarf herbaceous plants, some well known for their beauty and others for their fragrance. They have all alternate leaves, which are in some of the species heart-shaped, and in others are remarkable for the large size of their stipules, which, indeed, have more the appearance of leaves than the leaves themselves: the latter are called pansies, or kinds of heartsease; while those with the cordate leaves are the true violets. The word *Viola* is said by some to have been derived from the name of *Io*, whose first food was a violet after she had been changed into a cow by Juno; but others derive the name from

that of the nymph *Ion*. This genus was placed by Linnaeus in the class Pentandria, on account of its five stamens; and in the order Monogynia, from its single style. The flowers of some of the species are still used medicinally; and the roots of others are said to act as a strong emetic.

1.—THE SWEET VIOLET. (*VIOLA ODORATA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 619; 2d ed., t. 329; and our *fig. 1*, in Pl. 13. heart-shaped, nearly smooth, as well as their foot-stalks. Sepals obtuse. Lateral petals with a hairy central line. (*Lindley*.)

SPECIFIC CHARACTER.—Stem none, producing runners. Leaves

DESCRIPTION, &c.—Few flowers are better known than the Sweet Violet; and no one has ever been a greater favourite with the poets. The general appearance of the Violet is well known, but the curiosity of its botanical construction would never be guessed by any one unacquainted with the subject. The calyx consists of five distinct sepals which stand up round the flower, so as to form a sort of hollow cup; in the centre of which is the corolla, the five petals of which seem to have nothing extraordinary in their appearance at first sight; but when examined closely, it will be found that the lower petal has its claw drawn out behind into a spur, which projects through two of the sepals, and that the two side petals are curiously furred at the base, so as to form a triangular roof-like opening in the centre of the flower, through which may be seen a small pale green ball. As there is no other appearance either of pistil or stamens, the student in botany will naturally ask what can have become of these important organs? The stamens will be found by opening the spur, when five very curious anthers will be discovered, which appear to grow out of the receptacle without any filaments. The filaments, however, are not wanting; but they are placed above the anthers, and dilated so as to have the appearance of a hood of pale brown membrane or skin. Two of the anthers have, in addition, a long tail, which is concealed in the spur of the flower. The pistil consists of a large ovary, with a narrow style, bent in its narrowest part and swelled out at the tip into the hollow ball seen through the opening in the centre of the flower. This ball has an opening in front, under which lies a kind of shutter-like lip, which completely conceals the stigma. It will thus be seen that though the violet appears such a simple flower, nothing can be more complicated than its botanical construction. The seed-vessel is also curious, as it looks like a smooth shining berry, partially covered by the calyx till the seeds are ripe, and then it bursts open with an elastic spring and divides into three valves, each of which has a membrane bearing four rows of seeds down its centre.

The poetical merits of the Violet consist in its simple elegance, its fragrance, and its apparently modest concealment of itself amongst its foliage. This has delighted the poets from the opportunities it has given them of comparing the plant to a beautiful maiden hiding herself from observation, and yet unable entirely to conceal her charms. Thus, one poet says:—

“Thou shalt be mine, thou simplest flower,  
Tenting thyself beneath the bower  
Thy little leaves have made;  
So meekly shrinking from the eye,  
Yet mark'd by every passer by—  
By thine own sweets betrayed.

Dear emblem of the meek-eyed maid,  
Whom, nurtur'd 'mid retirement's shade,  
The world hath never known—  
Who loves to glide unseen along,  
Unnotic'd by the idle throng  
Whom Fashion calls her own.”

*The Rev. H. Stowell.*

Other poets have also sung the Violet. Clare in his "Village Minstrel" speaks of it as one of the first flowers of spring :—

" And just to say the spring was come  
The Violet left her woodland home,  
And hermit-like, from storms and wind  
Sought the best shelter it could find  
Beneath long grass."

Moore tells us that the Sweet Violet is highly esteemed in the East, and that it is used, combined with sugar, to make sherbet ; and speaking of a maiden who sang the charms of home while in captivity, he adds :—

" Her dream of home steals timidly away,  
Shrinking as violets do in summer's ray."

The Violet forms also a favourite emblem for a lady's seal, with the motto "*Il faut me chercher.*" Another poet has compared it to woman's love :—

" A woman's love, deep in the breast,  
Is like the violet flower  
That lifts its modest head apart  
In some sequestered bower."

Shakespeare says :—

" Violets dim,  
But sweeter than the lids of Juno's eyes,  
Or Cytherea's breath."

And then again, in the "Twelfth Night," he has those beautiful and well-known lines :—

" That strain again !—it had a dying fall !—  
Oh ! it came o'er my ear like the sweet south,  
That breathes upon a bank of violets,  
Stealing and giving odour."

Rapin, who wrote a Latin Poem on Gardens in the sixteenth century, tells a curious legend of the origin of the Violet. He says that this simple flower was once a maiden called Ianthis, one of Diana's nymphs, who attracted the attention of Apollo ; and flying from his pursuit, implored Diana to destroy the beauty which occasioned her so much trouble. Diana complying, changed the maiden's beautiful face into a dusky blue ; but Ianthis soon began to deplore the loss of her charms, and pined away, after which the pitying goddess changed her into a flower which still shrinks from Apollo, (the sun), and hides her diminished beauty in the shade.

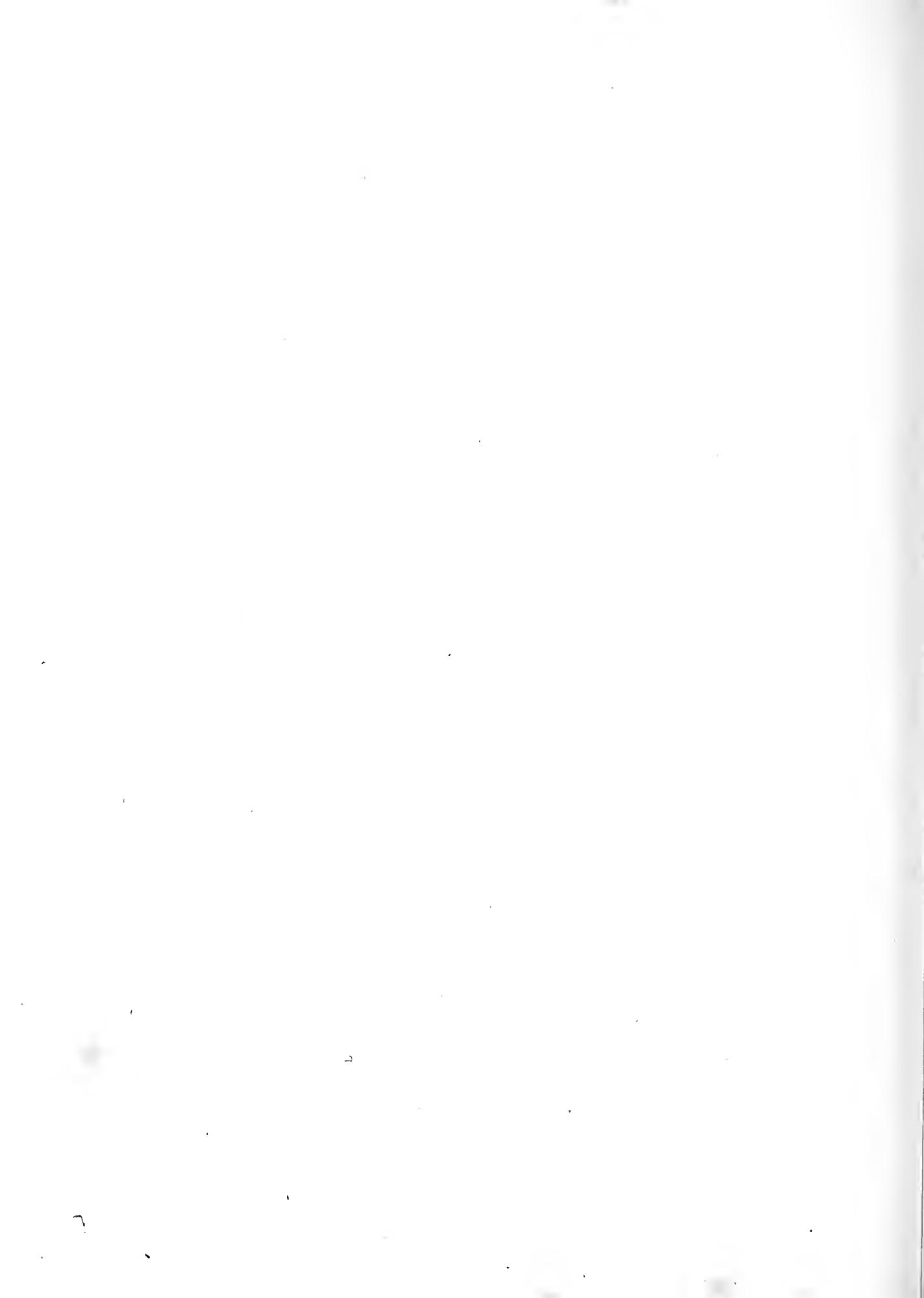
It would take too much space to quote all the beautiful poetry which has been written on the Violet ; but the following lines by Barry Cornwall are somewhat out of the common routine :—

" It has a seemt as though Love for its dower  
Had on it all his odorous arrows tost ;  
For, though the rose has more perfuming power,  
The Violet (haply 'cause 'tis almost lost,  
And takes us so much trouble to discover)  
Stands first with most, but always with a lover."

The Violet was formerly the emblem of liberty ; and it was adopted by Buonaparte during the time he was in the Isle of Elba, as a token by which his partizans recognised every one who carried this flower in his button-hole as his friend. Indeed, when speaking of Buonaparte, they called him *La Violette*. At the floral games at Toulouse, instituted in the early part of the fourteenth century, the prize gained by the best Troubadour, was a golden Violet ; and Miss Landon took this as the subject of one of her poems.



1. Sweet Violet. 2. Dog Violet. 3. Wild Hearts-ease. 4. Yellow Hearts-ease.



Even the medical uses of the Sweet Violet have something poetical in them ; for Culpepper tells us that the flowers of this plant, when held in the palm of the hand and pressed against the temples, were found to relieve headaches and revive the drooping spirits.

It may perhaps be also interesting to the young student in botany, to know that it was from having the curious construction of the Violet pointed out to him, that Bartram, the celebrated American botanist, first began to take an interest in the study of plants.

The White Violet is only a variety of the common kind ; but it is still more fragrant. It grows abundantly on calcareous soils ; and I remember gathering it in my youth in great abundance in the woods round the ruins of Dudley Castle. The White Violet in the floral language, is made the emblem of candour, as the common kind is that of modesty.

## 2.—THE DOG VIOLET. (*VIOLA CANINA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 620 ; 2nd ed., t. 331 ; and our *fig. 2*, Leaves oblong, heart-shaped. Calyx acute. Stipules serrated. in Pl. 13.

SPECIFIC CHARACTER.—Stem at length ascending, channelled.

DESCRIPTION, &c.—This species having no fragrance, is sometimes called the scentless Violet. It is common in every copse and heath, where it can find shade ; while, as it never appears till the sweet-scented Violet has gone out of flower, it was supposed by some of the old writers on floriculture to be the same plant after it had lost its scent and part of its colour from being exposed to the heat of the sun. The following lines have been addressed to it :—

“ Deceitful plant ! from thee no odours rise,  
Perfume the air, or scent the mossy glade,  
Although thy blossoms wear the modest guise  
Of her, the sweetest offspring of the shade.

Yet not like her’s, still shunning to be seen,  
And by their fragrant breath alone betray’d,  
Veil’d in the vesture of a scantier green,  
To every gazer are thy flowers display’d.

Thus virtue’s garb hypoerisy may wear,  
Kneel as she kneels, or give as she has given ;  
But ah ! no meek retiring worth is there,  
No incense of the heart exhales to heaven !”—*C. H. Townsend.*

## 3.—THE WILD HEART’S-EASE. (*VIOLA TRICOLOR, Lin.*)

SYNONYMES.—*V. arvensis, Sibth.* The Pansy.

ENGRAVINGS.—Eng. Bot., t. 1287 ; 2nd ed., t. 333 ; and our *fig. 3*, in Pl. 13.

SPECIFIC CHARACTER.—Stem angular, diffuse, divided. Leaves

oblong, deeply crenate. Stipules lyrate, pinnatifid. Bracteas obsolete. (Smith.)

DESCRIPTION, &c.—The wild Heart’s-ease, or Pansy, is a very common British annual, growing most commonly in the headlands, or unploughed part of corn-fields ; but also by the roadside, and in various other situations wherever there is a portion of waste, marly ground. The different kinds of Heart’s-ease cultivated in gardens, spring partly from this species, and partly from *V. lutea*, hybridised by various foreign kinds. The botanical construction of the Heart’s-ease is the same as that of the sweet Violet, excepting that the spur of the flower is much shorter. Perhaps no flower had ever more popular names than this : besides its ordinary names of Pansy and Heart’s-ease, it is called Love in idleness; Three faces under a hood; Kiss behind the garden-gate; Jump up and kiss me, and by various other fanciful appellations. The name of Pansy is evidently derived from

*pensée*, a thought; and hence also, in the language of flowers, the Pansy means think of me. Shakespeare, in the following well-known lines, gives an origin of the name of Love in idleness.

“ Yet mark'd I where the bolt of Cupid fell :  
 It fell upon a little western flower,  
 Before milk-white, now purple with love's wound,  
 And maidens call it Love in Idleness.  
 The juice of it, on sleeping eyelids laid,  
 Will make or man or woman madly dote  
 Upon the next live creature that it sees.”

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4.—THE YELLOW HEART'S-EASE. (*VIOLA LUTEA, Smith.*)

SYNONYME.—*V. grandiflora, Huds.*

ENGRAVINGS.—Eng. Bot., t. 721; 2nd ed., t. 334; and our *fig. 4*, in Pl. 13.

SPECIFIC CHARACTER.—Stem triangular, unbranched. Leaves ovate-oblong, crenate, fringed. Stipules lobed, palmate. Bracteas minute, scarcely toothed. Spur the length of the calyx. (*Smith.*)

DESCRIPTION, &c.—This species is generally found in Wales and Scotland; but it is also met with occasionally in the mountainous districts of England, always growing among grass, and flowering from May till September. The petals are generally all yellow, but sometimes two of them are purple, and occasionally the whole. This species is a perennial, and hence the garden varieties derived from it are longer-lived than those which spring from *V. tricolor*, which is only an annual.

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THE HAIRY VIOLET. (*V. HIRTA, Lin.*)

This is a perennial species, which grows only on calcareous soils. The flowers are of a pale lilac, small, and without fragrance. They appear in April and May.

THE MARSH VIOLET. (*V. PALUSTRIS, Lin.*)

This species has still smaller and paler flowers than the last. It is a native of sandy, turf-heaths, in the north of England and Scotland, and it is occasionally found in the south. It is a perennial, with a long, creeping root.

THE YELLOW-SPURRED VIOLET. (*V. FLAVICORNIS, Smith.*)

This is a very small plant, never found but in very poor soil. It is supposed, indeed, to be a very small variety of *V. canina*; but it differs from that plant in the short, blunt, yellowish spur of the flower and its very rigid leaves.

THE CREAM-COLOURED VIOLET. (*V. LACTEA, Smith.*)

This is a white-flowered species only found growing in boggy places, and rather a doubtful native.

THE YELLOW SEA PANSY. (*V. CURTISII, Forster.*)

A pretty little plant, with pale-yellow flowers; found in great abundance in Devonshire and also in Wales and Ireland. It is probably only a variety of *V. tricolor*.

## CHAPTER VIII.

## THE ROCK-ROSE FAMILY. (CISTINAE, Juss.)

CHARACTER OF THE ORDER.—Sepals five, continuous with the pedicel, persistent, unequal; the three inner with a twisted aestivation. Petals five, hypogynous, very fugitive, twisted in aestivation in a direction contrary to that of the sepals. Stamens indefinite in number, hypogynous, distinct; anthers innate. Ovarium distinct, one or many-celled; ovula with a foramen at their apex; style single; stigma simple. Fruit capsular, usually three or five-valved, occasionally teu-

valved, either one-celled, with parietal placentæ in the axis of the valves, or imperfectly five or ten-celled, with dissepiments proceeding from the middle of the valves, and approaching each other in the ecotile. Seeds indefinite in number. Embryo inverted, either spiral or curved, in the midst of mealy albumen. Shrubs or herbaceous plants. Branches often viscid. Leaves usually entire, opposite or alternate, stipulate or exstipulate. Racemes usually unilateral. (Lindley.)

DESCRIPTION, &c.—There is but one genus in this order, which contains British plants. Those which were called *Cistus* by Linnæus being now placed in the genus *Helianthemum*.

## GENUS I.

## THE SUN-CISTUS, OR ROCK-ROSE. (HELIANTHEMUM, Tourn.)

*Lin. Syst.* POLYANDRIA MONOGYNIA.

GENERIC CHARACTER—Sepals three, equal, with two occasional external ones. Petals five. Stigma capitate. Style either wanting or present. Capsule of three valves. Trailing half shrubby plants. (Lindley.)

DESCRIPTION, &c.—The genus *Helianthemum* has been separated from *Cistus*, on account of its capsule, which is triangular and one-celled, opening into three valves; whereas the capsule of the *Cistus* has five or ten valves. The name of *Helianthemum* signifies literally Sun-flower, because the flowers only expand in sunshine, and are said to follow the course of the sun; a peculiarity attributed by poets to the annual Sun-flower of our gardens, but which that plant really does not possess. This plant is placed in the Linnæan class Polyandria, because it has numerous stamens; and in the order Monogynia, on account of its single seed-vessel.

## 1.—THE COMMON CISTUS. (HELIANTHEMUM VULGARE, Gærtner.)

SYNONYMES.—*Cistus Helianthemum*, *Lin.*; *C. tomentosus*, *Smith*; the common Sun-Rose; the Sun-Cistus.

ENGRAVINGS.—Eng. Bot., t. 1321; 2nd ed., t. 760; and our *fig. 1*, in Pl. 14.

SPECIFIC CHARACTER.—Leaves opposite, ovate or oblong, nearly flat, green on the upper surface. Racemes terminal, with bractæ. Sepals five, the inner furrowed and scarious at the edge. Style bent at the base, somewhat clavate at the apex. Seeds black. (Bentham.)

DESCRIPTION, &c.—This is a most elegant little shrub, which grows wild on banks in various parts of England; but generally either in a calcareous or gravelly soil. Its blossoms, which appear in July and August, are very abundant and extremely beautiful, though, unfortunately, their beauty is very short-lived, as they generally drop their petals in a few hours. The plants, however, continue producing a succession of flowers for a considerable time, as there is seldom more than one expanded at a time on each raceme. The stamens, when touched with a pin, spring back from the style and spread themselves out on the petals.

“ Frail plant! whose early buds display  
Their beauties to the opening day,  
But fade with its declining ray,  
To bloom no more.

Fresh buds the morning will bestow.  
The cheering sun again will glow,  
And gentle zephyrs round thee blow,  
With good in store.

Thus when we see our hopes decay,  
And fade with fortune’s feeble ray,  
Sinking with premature decay,  
To rise no more—

We turn from what vain mortals prize,  
And leaving useless tears and sighs,  
We raise our hopes beyond the skies,  
For good in store.”—*Anon.*

Another poet has described this flower in the following pretty lines :—

“ Yet though thy golden flowers fall fast,  
Long ere appears the evening crescent,  
Another bloom succeeds the last,  
As lovely and as evanescent.”

## 2.—THE COMMON WHITE CISTUS. (*HELIANTHEMUM APENNINUM, Dec.*)

SYNONYMES.—*H. polifolium, Hook.*; *Cistus polifolius, Lin.*

ENGRAVINGS.—Eng. Bot., t. 1322; 2nd ed., t. 762; and our *fig.* 2, in Pl. 14.

SPECIFIC CHARACTER.—Hoary in every part. Leaves opposite,

ovate-oblong or oblong-linear, hoary on each side, more or less revolute at the edge. Racemes terminal, with bractæ. Sepals five, the inner furrowed and scarious at the edge. Style bent at the base, somewhat clavate at the apex. Seeds black. (*Bentham.*)

DESCRIPTION, &c.—This very beautiful little shrub closely resembles the common Cistus, except in the colour of its flowers, which are of a pure white. It is rather rare, being found only in Somersetshire and Devonshire; though it grows in great abundance in the latter county on the rocks near Torquay, quite close to the sea.

### THE HOARY CISTUS. (*H. CANUM, Dunal.*)

This is a rare species, which has only been found on rocks in the north of England, and in Wales. It is a dwarf shrub, not above three or four inches high, with small, bright yellow flowers.

### THE SPOTTED CISTUS. (*H. GUTTATUM, Miller.*)

This is an annual species which has only been found in the Isle of Man, and in Jersey. The flowers are small, and of a bright yellow, with a brownish, purple spot at the base of each petal.

### THE COMMON ANNUAL CISTUS. (*H. LEDIFOLIUM, Willd.*)

This has only been found on the Somersetshire shore of the Bristol Channel. The flowers are very small, and fall as soon as they expand; but the plant is easily known by its large, triangular, glossy capsules.

### THE DOTTED-LEAVED CISTUS. (*H. SURREJANUM, Miller.*)

This species, which is supposed by some to be only an accidental variety of *H. vulgare*, has been found at Croydon in Surrey, and on the Sussex Downs.

## CHAPTER IX.

### THE SUN-DEW FAMILY. (*DROSERACEÆ, Dec.*)

CHARACTER OF THE ORDER.—Sepals five, persistent, equal, with an imbricate aestivation. Petals five, hypogynous. Stamens distinct, withering, either equal in number to the petals and alternate with them, or 2, 3, or 4 times as many. Ovarium single; styles 3—5, either wholly distinct, or slightly connected at the base, bifid or branched. Capsule of one or three cells, and three or five valves, which bear the

placentæ either in the middle or at their base. Seeds either naked or furnished with arillus. Embryo straight, erect, in the axis of a fleshy or cartilaginous albumen. Delicate herbaceous plants, often covered with glands. Leaves alternate, with stipular cilia and a circinate vernation. Peduncles, when young, circinate. (*Lindley.*)

DESCRIPTION, &c.—There is only one genus in this order.



1. Common Cestus. 2. Common White Cestus. 3. Sea Heath. 4. Great Sun-dew. 5. Milkwort



## GENUS I.

THE SUN-DEW. (DROSERA, *Lin.*)*Lin. Syst. PENTANDRIA HEXAGYNIA.*

**GENERIC CHARACTER.**—Sepals and petals five, without appendages. Stamens five. Styles 3—5, divided in two. Glandular herbaceous plants. (Dec.)

**DESCRIPTION, &c.**—This is a genus of very singular little plants, all perennials and growing only on very wet land. The leaves spring from the root, and are edged with rather long, glandular hairs, from each of which exudes a drop of viscous fluid, so that the whole of the leaves look as though covered with drops of dew. The flowers are small, but very pretty. The name of Drosera is from *drosos*, dew; and that, as well as Sun-Dew, evidently alludes to the ordinary appearance of the plant. The genus is placed in the Linnean class Pentandria, on account of its five stamens; and in the order Hexagynia, because, though it has only three styles, each of them looks as though it were cut in two, and thus it appears to have six.

1.—THE COMMON, OR ROUND-LEAVED SUN-DEW. (DROSERA ROTUNDIFOLIA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 867; 2nd ed., t. 458.

**SPECIFIC CHARACTER.**—Leaves depressed, nearly orbicular, on hairy foot-stalks. Flower-stalks radical, racemose. (*Smith.*)

**DESCRIPTION, &c.**—This is the most common of all the British species; and amongst other places it is found in great abundance on Woking Common. It has been called the British Fly Trap, as insects have been sometimes found sticking to its leaves; but they are evidently not caught in the same manner as by the leaves of the American Fly Trap, being apparently only detained by the sticky liquid exuding from the hairs. The leaves are round, and grow in a circle, close to the ground. The flowers are white and small, though very pretty; they appear in July.

2.—THE LONG-LEAVED SUN-DEW. (DROSERA LONGIFOLIA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 868; 2nd ed., t. 459.

**SPECIFIC CHARACTER.**—Leaves obovate, erect, on naked foot-stalks. Flower-stalks radical, racemose. (*Smith.*)

**DESCRIPTION, &c.**—This species is generally found near the other, and it flowers at the same time. It is, however, very distinct in all its parts. The leaves are long, instead of being round; and the flowers are pinkish, with frequently six stamens and petals instead of five, and eight styles instead of six. The juice of this species is so acrid that it is often used by the country people to remove warts and corns, but it is said to occasion the rot in sheep, and hence both this and the preceding species are known by the name of Red-rot in many parts of England.

3.—THE GREAT SUN-DEW. (DROSERA ANGLICA, *Hudson.*)

**ENGRAVINGS.**—Eng. Bot., t. 869; 2nd ed., t. 460; and our *fig. 4*, in Pl. 14. | stalks. Flower-stalks radical, racemose. Styles, 8. Capsules with 4 valves. (*Smith.*)

**SPECIFIC CHARACTER.**—Leaves oblong, obtuse, erect, on naked foot-

**DESCRIPTION, &c.**—This is the handsomest species of all the genus; but it is comparatively rare. It grows, however, in similar situations, that is always on boggy or turf land; but generally near a small pond or rivulet where the moisture has sunk into the ground, so as to render it soft to some little distance from the water. It also is generally found growing in the shade, or at the bottom of some deep glen; whereas the other species are

generally found on an open common. The following lines, addressed to the Great Sun-Dew, are by an American poet:—

“ By the lone fountain’s secret bed,  
Where human footsteps rarely tread ;  
'Mid the wild moor or silent glen,  
The Sun-Dew blooms, unseen by men ;

Spreads there her leaf of rosy hue,  
A chalice for the morning dew ;  
And ere the summer’s sun can rise,  
Drinks the pure waters of the skies.”

## CHAPTER X.

### THE SEA-HEATH FAMILY. (FRANKENIACEÆ, *St. Hilaire.*)

**CHARACTER OF THE ORDER.**—Sepals 4—5, united in a furrowed tube, persistent, equal. Petals alternate with the sepals, hypogynous, unguiculate, with appendages at the base of the limb. Stamens hypogynous, either equal in number to the petals, and alternate with them, or having a tendency to double the number. Anthers roundish, versatile. Ovarium superior. Style filiform, bifid or trifid. Capsule one-celled,

enclosed in the calyx, two, three, or four-valved, many-seeded; dehiscence septicidal. Seeds attached to the margins of the valves, very minute. Embryo straight, erect, in the midst of albumen. Herbaceous plants or under-shrubs. Stems very much branched. Leaves opposite, exstipulate, with a membranous sheathing base. Flowers sessile in the divisions of the branches, and terminal, embosomed in leaves. (*Lind.*)

**DESCRIPTION, &c.**—There is only one genus in this order.

### GENUS I.

#### THE SEA-HEATH. (FRANKENIA, *Lin.*)

*Lin. Syst. HEXANDRIA MONOGYNIA.*

**GENERIC CHARACTER.**—Style trifid, with oblong lobes, the inner surface of which is stigmatic. Capsule of three or four-valves, many-seeded. (*Dec.*)

**DESCRIPTION, &c.**—These are pretty little plants, growing close to the ground on the sea-shore like a dwarf species of Heath, and hence their English name. The botanic name was given to it in honour of Dr. Frankeniæ, a Professor of Botany at Upsal. Only two species have been found in England. This genus is placed in the Linnæan class Hexandria, on account of its six stamens; and in the order Monogynia, from its single style.

#### 1.—THE COMMON SEA-HEATH. (FRANKENIA LÆVIS, *Lin.*)

**ENGRAVINGS.**—Eng. Bot., t. 205; 2nd ed., t. 463; and our *fig. 3.*, in Pl. 14.

**SPECIFIC CHARACTER.**—Flowers solitary. Leaves linear, revolute, crowded; fringed at the base. (*Smith.*)

**DESCRIPTION, &c.**—This is a little, creeping, perennial plant; only found in muddy, salt marshes, and generally on the eastern coast of England. Its pretty little flowers are sometimes found on the tips of the branches, and sometimes in the axils of the leaves. There is another species called the powdery Sea-Heath, *F. pulexulenta*, which is an annual found occasionally on the coast of Sussex; though it is said to be one of the rarest of the British plants.

“ Of humble growth, scarce rising from the earth,  
It crouches in the shade that gave it birth,  
As though 'twere conscious of its want of worth.”

## CHAPTER XI.

THE MILKWORT FAMILY. (POLYGALEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Sepals five, persistent, unequal, the inner usually petaloid. Petals 3-4, hypogynous, adhering to the tube of the stamens. Stamens eight, monadelphous in two opposite equal pairs. Anthers one-celled, bursting by pores at the apex. Ovarium single, generally two-celled; style single, incurved; stigma funnel-shaped or two-lobed. Fruit capsular or drupaceous, one or two-celled;

dehiscence loculicidal. Seeds pendulous, solitary, with an arillus, sometimes hairy or comose. Embryo straight; albumen usually copious and fleshy, occasionally absent; but, in that case, the inner coating of the testa is tumid. Herbaceous plants or shrubs. Leaves mostly alternate, articulated with the stem. Flowers racemose. Juice of the root milky. Bark and root bitter. (*Lindley.*)

DESCRIPTION, &c.—There is only one British plant in this order.

## GENUS I.

THE MILKWORT. (POLYGALA, *Lin.*)

*Lin.* *Syst.* DIADELPHIA OCTANDRIA.

GENERIC CHARACTER.—Sepals persistent, the two inner wing-shaped. Petals 3-5, adhering to the tube of the stamens; the lower carinate. Capsule compressed, elliptical, obovate, or obcordate. Seeds downy, without a coma, with a carunculate hilum. (*Dec.*)

DESCRIPTION, &c.—This genus contains only one British species; but it is interesting on account of the peculiar construction of the flowers. These flowers appear at first sight to resemble those of the Sweet Pea; but on a closer examination their construction will be found very curious. The calyx is said to consist of five sepals, but two of them are coloured like the corolla; of the petals, two stand erect, while the other three grow together so as to form a keel, while their upper part is cut into a kind of fringe; the stamens are hidden in the keel; their filaments grow together so as to form a kind of membrane, and each anther has only one cell, which opens by a pore at the apex. The style and stigma form a kind of hood. The seed-vessel is a flat two-celled capsule, which is completely concealed by the large, coloured leaves of the calyx, which remain on after the rest of the flower has fallen, but become green when the capsule is nearly ripe. The seeds are also very curious; for each has a large, white protuberance at one end. This genus is placed in the Linnæan class Diadelphia, because its stamens are in two brotherhoods, that is to say, four are on one side, with their filaments growing together, and four on the other; and in the order Octandria, on account of its having eight stamens. The name of *Polygala* signifies much milk, and thus both the English and botanic names allude to the milky juice of the plant.

1.—THE COMMON MILKWORT. (POLYGALA VULGARIS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 76; 2nd ed., t. 989; and our *fig.* 5, in Pl. 14.

of each flower-stalk, deciduous. Wings about equal to the corolla. Stems ascending, simple, herbaceous. Leaves linear-lanceolate.

SPECIFIC CHARACTER.—Flowers erect. Bracts three, at the base

(*Smith.*)

DESCRIPTION, &c.—The common Milkwort is very different from the splendid plants belonging to the genus *Polygala*, which are so often seen in our greenhouses. The English Milkwort is a little plant with creeping stems, slightly curving upwards when in flower. The flower itself is of various shades of blue, purple, and rose-colour, occasionally becoming white. In the language of flowers this plant signifies solitude, because it is said that hermits used to plant it round their habitations. The Greeks fancied that this plant was favourable to cattle, on account of the great quantity of milk it contained, and the Americans supposed the milk of one species to be an antidote against the bite of the rattle-snake.

## THE BITTER MILKWORT, (P. AMARA,)

Is sometimes found growing wild in England on chalky soils; but it is certainly not a true native.

## CHAPTER XII.

THE MALLOW FAMILY. (MALVACEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Sepals five, very seldom three or four, more or less united at the base, with a valvate aestivation, often provided with external bractæ forming a kind of involucrum. Petals of the same number as the sepals, hypogynous, with a twisted aestivation, either distinct or adhering to the tube of the stamens. Stamens usually indefinite, sometimes of the same number as the petals, hypogynous; filaments monadelphous; anthers one-celled, reniform, bursting transversely. Ovarium formed by the union of several carpella round a common axis, either distinct or coherent; styles the

same number as the carpella, either united or distinct; stigmata variable. Fruit either capsular or baccate; its carpella being either monospermous or polyspermous, sometimes united in one, sometimes separate or separable; dehiscence either loculicidal or septicidal. Seeds sometimes hairy; albumen little or none; embryo curved, with twisted and doubled cotyledons. Herbaceous plants, trees, or shrubs. Leaves alternate, more or less divided, stipulate. Hairs stellate. Peduncles usually axillary. (*Lindley.*)

DESCRIPTION, &c.—All the genera contained in this tribe are easily recognised by the central column into which the anthers are united. There are three genera which contain British plants; viz., the Mallow, the Marsh-Mallow, and Lavatera, or the Tree-Mallow. They all abound in mucilage, and are reckoned efficacious in diseases of the lungs. All the genera belonging to this order are placed in the Linnæan class Monadelphia, from their stamens being united into one brotherhood; and in the order Polyandria, from the stamens being numerous.

## GENUS I.

THE MALLOW. (MALVA, *Lin.*)

*Lin. Syst. MONADELPHIA POLYANDRIA.*

GENERIC CHARACTER.—Calyx surrounded by an involucrum, formed generally of three leaves, seldom of five or six; bracteolæ oblong or setaceous. Fruit numerous, capsular, one-seeded, arranged in a circle. (*Dec.*)

DESCRIPTION, &c.—There are three British species of Mallows, all of which are very common, and they are easily distinguished from the other genera belonging to the order by the involucrum of the calyx consisting of three distinct leaflets; the petals being wedge-shaped and apart at the base, and the capsule consisting of a circle of eleven or more carpels growing close together, and forming what the country children call cheeses, which are good to eat, from the mucilaginous matter they contain. The plants are generally covered with hairs, which are disposed in little, spreading tufts. The names both of Malva and Mallow are taken from the Greek word *malasso*, in allusion to the emollient qualities of the plants.

I.—THE COMMON MALLOW. (MALVA SYLVESTRIS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 671; 2nd ed., t. 978; and our *fig. 1*, in Plate 15.

SPECIFIC CHARACTER.—Stem upright, herbaceous. Leaves with seven acute lobes. Foot-stalks and flower-stalks hairy. (*Smith.*)

DESCRIPTION, &c.—This species is the commonest of all the kinds of Mallow; and one of the commonest of British plants. There is scarcely a hedge-bank or piece of waste land by the road-side in which it is not to be found; and it is particularly abundant in country churchyards. It continues in blossom from May till the end



1. Common Mallow. 2. Musk Mallow. 3. Hairy Marsh Mallow. 4. Tree Mallow



of October: the plant is a perennial. It is used in medicine as an emollient. In the language of flowers, it signifies Charity; and as formerly it was the custom to plant it round the graves of the dead, it would seem as though it were intended to teach us to look with an eye of mercy on their faults.

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2.—THE DWARF MALLOW. (*MALVA ROTUNDIFOLIA*, *Lin.*)

SYNONYME.—*M. parviflora*, *Hudson.*

ENGRAVINGS.—Eng. Bot., t. 1092; 2nd ed., t. 979.

SPECIFIC CHARACTER.—Stems prostrate. Leaves roundish, heart-shaped, bluntly 5-lobed. Stalks when in fruit bent downwards. (*Smith.*)

DESCRIPTION, &c.—This species is of low growth, with prostrate stems and a strong deep root. The flowers are small, and generally of a bright pink, and they continue appearing all the summer. The leaf is roundish, and plaited. The variety, sometimes called *M. pulsilla*, has flowers so small as to be inconspicuous, and large, weedy-looking leaves. This species is very common by the road-sides in every part of England.

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3.—THE MUSK MALLOW. (*MALVA MOSCHATA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 754; 2nd ed., t. 980; and our *fig.* 2, in Plate 15.

SPECIFIC CHARACTER.—Radical leaves kidney-shaped, cut; the rest

in fine deep, pinnatifid, jagged segments. Calyx hairy, its outer sepals linear-lanceolate. (*Smith.*)

DESCRIPTION, &c.—This species is one of the handsomest of the wild kinds of Mallow, and it generally flowers abundantly in July and August. It is common by the road-sides in gravelly soil, where it frequently grows two or three feet high, though always with very slender, branching stems. The lower leaves are lobed; but those of the stem are cut into very slender segments. The whole plant smells faintly of musk. It is a perennial, and is frequently cultivated in gardens.

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GENUS II.

THE MARSH-MALLOW. (*ALTHAEA*, *Lin.*)

*Lin. Syst. MONADELPHIA POLYANDRIA.*

GENERIC CHARACTER.—Calyx surrounded by an involucrum having from six to nine divisions. Fruit capsular, one-seeded, collected in a five-lobed head. (*Dec.*)

DESCRIPTION, &c.—This genus is very nearly allied to the Mallow; but it is distinguished by the involucrum being divided into from six to nine parts, instead of being only in three segments, as in the Mallow. There are only two species belonging to the genus *Althaea* natives of Britain; though many of them are common in gardens, and particularly the well known Hollyhock. The name of *Althea* is taken from *altheo*, to cure, in allusion to the medical qualities of the plants.

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1.—THE COMMON MARSH-MALLOW. (*ALTHAEA OFFICINALIS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 147; 2nd ed., t. 981.

SPECIFIC CHARACTER.—Leaves simple, very soft and downy, slightly five-lobed. (*Smith.*)

DESCRIPTION, &c.—This plant is very common in salt marshes and other moist places near the sea. It grows three or four feet high, with handsome leaves, and rather delicate-looking flowers. The whole plant feels exceedingly soft, owing to the pubescence, or down, with which the leaves are covered. It is a perennial,

flowering in August and September, and a decoction of it is employed for coughs. In France, lozenges and a syrup are made of it, the latter of which is well known, even in England, under the name of *Siroop de Guimauve*.

2.—THE HISPID MARSH-MALLOW. (*ALTHEA HIRSUTA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 2674; 2nd ed., t. 981\*; and our *fig. 3*, in Pl. 15.

ones obtusely, upper ones acutely, lobed and toothed. Stem hispid. Peduncles single-flowered, longer than the leaves. (*Hooker.*)

SPECIFIC CHARACTER.—Leaves heart-shaped, rough with hairs; lower

DESCRIPTION, &c.—This species was long supposed not to be a native of Britain, but is now ascertained that it has been long found in the fields near Cobham, in Kent, though it has not been found in any other part of England. It is a dwarf plant, seldom growing more than six inches high, with dark rose-coloured flowers, which are very ornamental. The plant is covered with long, rigid, bristle-like hairs, beside the fine star-like down which is common to other plants belonging to the order. It is an annual, and flowers in June and July.

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GENUS III.

THE LAVATERA. (*LAVATERA, Lin.*)

*Lin. Syst. MONADELPHIA POLYANDRIA.*

GENERIC CHARACTER.—Calyx surrounded by an involucrum of from three to six divisions. Fruit capsular, one-seeded, collected in a circle round a common axis, which is dilated in various ways. (*Dec.*)

DESCRIPTION, &c.—The genus Lavatera was named in honour of the celebrated Lavater, the physiognomist. The genus is distinguished from the Mallows, by the seeds being placed in the dilated axis in the centre of the flower, instead of being enclosed in separate carpels surrounding that axis. The calyx consists of five sepals, which bend down over the centre; and there is a large spreading involucre, consisting of three broad leaflets, which grow together at the base.

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1.—THE TREE-MALLOW. (*LAVATERA ARBOREA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1841; 2nd ed., t. 982; and our *fig. 4*, in Pl. 15.

SPECIFIC CHARACTER.—Stem arboreous. Leaves downy, plaited, with seven angles. Stalks axillary, aggregate, single-flowered. (*Smith.*)

DESCRIPTION, &c.—The Tree-Mallow is the only species of the genus ever found wild in Great Britain, and even this is certainly not a true native; as when it is found, it is only on cliffs overhanging the sea, and it is killed by the first frost if taken inland. Its stem is woody, like that of a tree, and it grows five or ten feet high; the flowers resemble those of the Mallow, but are of a crimson or dark rose-colour. It is a very handsome plant when cultivated, and it will grow in any common garden soil.

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CHAPTER XIII.

THE ST. JOHN'S-WORT FAMILY. (*HYPERICINE, Juss.*)

CHARACTER OF THE ORDER.—Sepals four to five, either more or less cohering, or wholly distinct, persistent, unequal, with glandular dots. Petals four to five, hypogynous, with a twisted aestivation and oblique venation, often having black dots. Stamens indefinite, hypogynous, in three or more parcels; anthers versatile. Ovary single, superior; styles several, rarely connate; stigmata simple. Fruit a

capsule or berry of many valves and many cells; the inner edges of the former being curved inwards. Seeds minute, indefinite, usually tapering; embryo straight, with an inferior radicle, and no albumen. Herbaceous plants, shrubs, or trees, with a resinous juice. Leaves opposite, dotted. Flowers generally yellow. Inflorescence variable. (*Lindley.*)

DESCRIPTION, &c.—There are only two genera belonging to this family, and both these were included in the genus *Hypericum* by Linnæus, and still are so, by many botanists. The reason why the Tutsan has been



1. Large-flowered St. John's wort 2. St. John's wort 3. Common St. John's wort  
4. Upright St. John's wort 5. Marsh St. John's wort



separated from the genus *Hypericum*, is that its fruit is a berry, while that of the *Hypericum* is a dry capsule. Both these genera are placed in the Linnæan class *Polyadelphia*, because their stamens are in five sets or brotherhoods; and in the order *Polyandria*, on account of the great number of the stamens.

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### GENUS I.

#### THE ST. JOHN'S-WORT. (*HYPERICUM, Lin.*)

*Lin. Syst.* *POLYADELPHIA POLYANDRIA.*

**GENERIC CHARACTER.**—Capsule membranous. Styles three to five, | Sepals five, more or less united at the base. Herbaceous plants or sometimes variable in number. Stamens numerous, polyadelphous, | shrubs. Leaves opposite, often with pellucid dots, or black dots at occasionally reduced to almost a definite number. Petals five. | the margin. (*Dec.*)

**DESCRIPTION, &c.**—The plants belonging to this genus are either perennials or shrubs, and their flowers are of a most brilliant golden yellow. The leaves of most of the species appear covered with little dots when they are held up to the light; these dots being, in fact, cells filled with a kind of resinous oil, which makes the plants give out a strong smell of resin when the leaves are rubbed between the fingers. The French call this plant *mille pertuis* or thousand holes, from these pellucid dots on the leaves. The flowers of all this genus have five petals and the stamens in five bundles, one bundle being at the base of each petal. The origin of the name of *Hypericum* is unknown, but it was used by Dioscorides.

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#### 1.—THE LARGE-FLOWERED ST. JOHN'S-WORT. (*HYPERICUM CALYCINUM, Lin.*)

**ENGRAVINGS.**—Eng. Bot., t. 2017; 2nd ed., t. 1050; and our *fig. 1.* in Pl. 16. | shrubby, branched, quadrangular. Segments of the calyx obovate, obtuse, permanently spreading. Leaves oblong. (*Smith.*)

**SPECIFIC CHARACTER.**—Styles five. Flowers solitary. Stem

**DESCRIPTION, &c.**—This very splendid plant is said to be only a doubtful native; but it certainly grows wild in many parts of England, particularly on the southern coast of Devonshire. It is also found in great abundance near Cork in Ireland. It is an evergreen under-shrub, with creeping underground stems; so that when once established, it spreads rapidly. It is called the Star of Bethlehem in Warwickshire.

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#### 2.—ST. PETER'S-WORT. (*HYPERICUM QUADRANGULUM, Lin.*)

**ENGRAVINGS.**—Eng. Bot., t. 370; 2nd ed., t. 1052; and our *fig. 2.* in Pl. 16. | sharp angles. Leaves with copious pellucid dots. Segments of the calyx lanceolate. (*Smith.*)

**SPECIFIC CHARACTER.**—Styles three. Stem herbaceous, with four

**DESCRIPTION, &c.**—This species is easily recognised by its square stalk, and the small size of its flowers, which appear almost all stamens. The species is common in every part of England wherever there is moist or marshy ground; but its favourite situation is a hedge-bank, where its roots can penetrate to the ditch below. The stems grow erect, two or three feet high, and are perfectly square, but not in the slightest degree shrubby.

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#### 3.—THE COMMON ST. JOHN'S-WORT. (*HYPERICUM PERFORATUM, Lin.*)

**ENGRAVINGS.**—Eng. Bot., t. 295; 2nd ed., t. 1053; and our *fig. 3.* in Pl. 16. | obtuse, with copious pellucid dots. Segments of the calyx lanceolate. (*Smith.*)

**SPECIFIC CHARACTER.**—Styles three. Stem two-edged. Leaves

**DESCRIPTION, &c.**—This is the true St. John's-Wort, which was formerly so universally believed to have the power of keeping away witches and evil spirits, when gathered on Midsummer Eve, on which account it was

called *Fuga Daemonum*. On the evening of the 23rd of June, a fire was lighted, called St. John's fire, and the young men and maidens, with wreaths of St. John's-Wort and Vervain round their brows, and large nosegays of the same plants in their hands, daneed round the fire, and threw the flowers into it, praying that the ensuing year might be fortunate to them. The fire was kept alight all night, and the next morning the doors were hung with garlands of St. John's-Wort, lilies, birch, and fennel, to keep out the evil spirits. It is said that the eustom of having a bonfire at this season arose from the words of Holy Writ, in which St. John is called a burning and shining light; and it was kindled at this period because Midsummer Day is the festival of St. John. Hence, also, this plant is called St. John's-Wort, as it was used at St. John's festival. In Loraine hay-making always begins on St. John's Day, and the hay-makers wear a little sprig of this plant in blossom, to ensure a favourable season for drying their hay. The plant flowers profusely; and indeed Cowper describes it as—

“Hypericum all bloom, so thick a swarm  
Of flowers, like flies, clothing its slender rods,  
That scarce a leaf appears.”

The following lines by an old English poet enumerate some of the superstitions believed, in the middle ages, respecting the Eve of St. John:—

“ Then doth the joyful feast of John the Baptist take its turn,  
When bonfires great, with lofty flowers, in every town do burn,  
When young men round about, with maidens, do dance in every street,  
With garlands wrought of St. John's-Wort, or else with Vervain sweet,  
And many other flowers fair, with violets in their hands,  
Whereas they all do fondly think, that whosoever stands

And through the flowers beholds the flame, his eyes shall feel no pain.  
When thus till night they danced have, they through the fire a main  
With striving minds do run, and all their herbs they east therein,  
And then with words devout and prayers they solemnly begin,  
Desiring God that all their ills may there consumed be,  
Whereby they think, for all that year, from agues to be free.”

In Lower Saxony almost every young girl plucks a sprig of St. John's-Wort on Midsummer Eve, and sticks it into the wall of her chamber; when, if the wall be damp, the sprig will retain its freshness and verdure for some time, and when this is the case, the belief is that the maiden will be a bride before the end of the year. If, on the contrary, the sprig immediately fades and withers away, the maiden is doomed to pine and wither away also. The following lines, which appeared in Blackwood's Magazine in 1821, and are said to be a translation from the German, allude to this superstition:—

“ The young maid stol through the cottage door,  
And blushed as she sought the plant of power:  
‘Thou silver Glow-worm, O lend me thy light!  
I must gather the mystic St. John's-Wort to-night,  
The wonderful herb, whose leaf will decide  
If the coming year shall make me a bride.’  
And the Glow-worm came  
With its silvery flame,  
And sparkled and shone  
Through the night of St. John,  
While it shone on the plant as it bloomed in its pride,  
And soon has the young maid her love-knot tied.  
With noiseless tread  
To her chamber she sped,  
Where the spectral moon her white beams shed:—

‘ Bloom here, bloom here, thou plant of power,  
To deck the young bride in her bridal hour !’  
But it drooped its head, that plant of power,  
And died the mute death of the voiceless flower;  
And a withered wreath on the ground it lay,  
More meet for a burial than bridal day.  
And when a year was passed away,  
All pale on her bier the young maid lay!  
And the Glow-worm came  
With its silvery flame,  
And sparkled and shone  
Through the night of St. John.  
And they closed the cold grave o'er the maid's cold clay,  
On the day that was meant for her bridal-day.’

It must be observed that the glow-worm is called in Germany St. John's-worm.

This speeies of Hypericum was also called the “Balm of the Warrior's wound,” and the “Herb of War,” partly because the juice of the plant was supposed to be of great efficacay not only in euring wounds, but

in relieving bruises; and partly in allusion to the numerous little dots in the leaves, which make them look as though they were pierced through in a thousand places. Thus an old poet says—

“ Hypericum was there, that herb of war,  
Pierced through with wounds, and marked with many a scar.”

In the days of chivalry, before two knights entered into mortal combat at a tournament, they were obliged to take an oath that neither of them carried about their persons any “ St. John’s-Wort,” or other “ Herb of Power.”

4.—THE UPRIGHT ST. JOHN’S-WORT. (*HYPERICUM PULCHRUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1227; 2nd ed., 1059; and our *fig. 4*, in Pl. 16. serrations. Stem erect, round. Leaves clasping the stem, heart-shaped, smooth. (*Smith.*)

SPECIFIC CHARACTER.—Styles three. Calyx ovate, with glandular

DESCRIPTION, &c.—This species is very common in dry woods and heaths, and it is a very elegant perennial. The stems grow from one to two feet high, and, though very slender, they are quite erect. The petals are of a bright yellow, and the stamens have dark crimson anthers.

5.—THE MARSH ST. JOHN’S-WORT. (*H. ELODES, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 109; 2nd ed., 1060; and our *fig. 5*, in Pl. 16. Stem procumbent, creeping, round, shaggy, like the roundish obtuse leaves. Panicle of few flowers. (*Smith.*)

SPECIFIC CHARACTER.—Styles three. Calyx obtuse, glandular.

DESCRIPTION, &c.—The stems of this species are procumbent, and root at their joints; the leaves are roundish, and the flowers, which are of a pale dingy yellow, only exposed in bright sunshine. The species is very common in spongy bogs, and is occasionally found on the banks of stagnant water.

THE IMPERFORATE ST. JOHN’S-WORT. (*H. DUBIUM, Lin.*)

This is a very handsome species, with rather large bright yellow flowers, which are frequently more or less sprinkled with dark purple glands. It is, however, easily distinguished by the leaves being without any transparent dots. It is a perennial, and flowers in July and August.

THE TRAILING ST. JOHN’S-WORT. (*H. HUMIFUSUM, Lin.*)

This is a pretty little perennial plant, with slender, trailing stems, and thin, pale-green, dotted leaves. The flowers are small, of a bright yellow, and the capsules are red. It is very common in every part of England in moist woods and on commons, where the soil is sandy or gravelly, and it flowers throughout all the summer.

THE MOUNTAIN ST. JOHN’S-WORT. (*H. MONTANUM, Lin.*)

This is an upright-growing perennial, bearing its pale-yellow flowers in a terminal panicle; but it is easily distinguished by the bracts, the calyx, and the lower surface of the leaves being fringed with a marginal row of dark purple glands. It is generally found on hilly places, in a chalky soil, and it flowers in July.

THE BEARDED ST. JOHN’S-WORT. (*H. BARBATUM, Jacq.*)

This is a very doubtful native, as it has only been found in one place in Perthshire.

THE HAIRY ST. JOHN'S-WORT. (H. HIRSUTUM, *Lin.*)

This species is very common in dry woods, on a chalky soil ; but it is rarely found in any other situation. It grows about two feet high, and the stems terminate in a large panicle of flowers. Its leaves are covered with a hairy down.

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## GENUS II.

THE TUTSAN, OR PARK LEAVES. (ANDROSÆMUM, *Allioni.*)

*Lin. Syst.* POLYADELPHIA POLYANDRIA.

GENERIC CHARACTER.—Capsule berried, almost one-celled. Calyx | Stamens many, united at the base. A shrub. Leaves sessile, divided into five pieces of unequal size. Petals five. Styles three. | Flowers terminal, stalked. (*Dec.*)

DESCRIPTION, &c.—The only plant contained in this genus has been separated from *Hypericum*, on account of its seed-vessel being a berry instead of a dry capsule. *Androsæmum* signifies man's blood, and alludes to the dark red juice given out by the leaves and other parts of this plant when crushed.

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THE COMMON TUTSAN. (ANDROSÆMUM OFFICINALE, *Allioni.*)

SYNONYME.—*Hypericum Androsæmum*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 1225; 2nd ed., t. 1051.

SPECIFIC CHARACTER.—Branches compressed. Leaves ovate.

DESCRIPTION, &c.—This species is generally found under trees, on a gravelly soil. The flowers are produced in panicles ; they are of a bright yellow, and have the stamens in three bundles, instead of five. The leaves are ovate and smooth. The berries are of a purplish-black, and the calyx remains on them till they are ripe. This plant was formerly considerd extremely efficacious in healing wounds, and hence it took the name of Tutsan, which is an abbreviation of the French words *Toute saine*. Park Leaves alludes to the plant generally growing under trees in parks.

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## CHAPTER XIV.

THE CARNATION FAMILY. (CARYOPHYLLEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Sepals 4—5, continuous with the peduncle ; either distinct, or cohering in a tube, persistent. Petals four-five, hypogynous, unguiculate, inserted upon the pedicel of the ovary ; occasionally wanting. Stamens twice as many as the petals, inserted upon the pedicel of the ovary along with the petals ; filaments subulate, sometimes monadelphous ; anthers innate. Ovary stipitate on the apex of a pedicel (called the anthophorus) ; stigmata

two to five-valved, either one-celled or two to five-celled, in the latter case with a loculicidal dehiscence. Placenta central, in the one-celled capsules distinct, in the two to five-celled capsules adhering to the edge of the dissepiments. Seeds indefinite in number, rarely definite ; albumen mealy ; embryo curved round the albumen, or straight ; radicle pointing to the hilum. Herbaceous plants, occasionally becoming suffrutaceous. Stems tumid at the articulations. Leaves always opposite, and often connate at the base. (*Lindley.*)

DESCRIPTION, &c.—The very numerous plants contained in this order may always be distinguished at first sight by their petals being unguiculate, that is, consisting of a flat coloured part called the limb, and a long, narrow white part called the claw, as may be seen in the petals of the Pink ; and also by their articulated stems, which are swelled at the joints. As the genera contained in the order are very numerous, they are generally divided into two sections, the first of which has the sepals of the calyx united into a cylindrical tube, as in the Pink ; and the second has the sepals distinct, or only slightly cohering at the base.

## I.—THE CATCHFLY TRIBE.

Sepals united into a cylindrical tube.

## GENUS I.

THE PINK AND CARNATION. (DIANTHUS, *Lin.*)

*Lin. Syst.* DECANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx tubular, five-toothed, with from two to four opposite imbricated scales at the base. Petals five, with long claws. Stamens ten. Stigmata two. Capsule one-celled. Seeds compressed, convex on one side, concave on the other, peltate. Embryo nearly straight. (Dec.)

DESCRIPTION, &c.—The plants contained in this well-known genus are almost always herbaceous, and they have all jointed stems, with opposite, entire, connate leaves, that is, leaves that are joined together and enfold the joint of the stem. The flowers are generally pink, or some other shade of red. The name of *Dianthus*, signifies literally, divine flower; and it is given to this genus on account of the beauty and fragrance of the Carnation. The Linnæan class is *Decandria*, from the ten stamens; and the order is *Digynia*, from the seed-vessels having two styles.

1.—THE WILD CARNATION. (DIANTHUS CARYOPHYLLUS, *Lin.*)

SYNONYMES.—*D. arenarius*, *Hudson*; the Clove Gillyflower; the Clove Pink.

ENGRAVINGS.—Eng. Bot., t. 214; 2nd ed., t. 616; and our fig. 2, in Pl. 17.

SPECIFIC CHARACTER.—Flowers solitary. Bracteæ almost rhomboid, very short. Petals notched, beardless. (Lindley.)

DESCRIPTION, &c.—This species, which is exceedingly abundant on the walls of Rochester Castle, and which grows on the half-ruined walls of old castles in almost every part of England, is supposed to be the origin of all the beautiful Carnations in our gardens. In its wild state, it is a dwarf perennial, with long fibrous roots, penetrating deeply into the mortar, and producing its single, pale pink flowers in July. The fragrance, however, of the wild flower is quite as delightful as that of the finest varieties; and the name of *Caryophyllus* alludes to the clove-like scent of the flowers. The word Carnation is supposed by some to be derived from *carnosus*, fleshy, and to allude to the delicate flesh-colour the flowers have when in a wild state. The name of Pink is said to be derived from the Dutch word for an eye; and the French name for both the Carnation and the Pink, which is *Œillet*, has the same meaning. Some botanists suppose that the word Carnation is a corruption of Coronation, which was the old name for what we now call the Carnation; as Sops in Wine was for the Pink, in allusion to the flowers being sometimes put into wine, in order to give it a perfumed flavour. Spenser uses both words in the following lines:—

“ Bring hither the pink and purple Columbine,  
With Gillyflowers;  
Bring Coronations and Sops in Wine,  
Worn by Paramours.”

Chaucer also says—

“ And many a clove Gillyflower  
To put in ale,  
Whether it be fresh or stale.”

The flowers are still used, boiled with sugar, to make a kind of syrup, which, when added to gin, whiskey, or spirits of wine, makes a liqueur. Shakspeare says:—

“ The fairest flowers o’ the season  
Are our Carnations and streak’d Gillyflowers.”

And in floral language, the Pink and the Carnation signify maiden's love.

See on the Castle's ruined wall  
The Pink spread forth its fringed ray,  
Blooming (though all around it fail)  
In triumph over art's decay.

Lovely as fancy's self could dream,  
And fragrant past the reach of art,  
Well may it to the maiden seem  
Type of the love that fills her heart!

The following interesting story is told by a German writer:—"Near Grenoble, at the foot of the ascent to Mount Cenis, stands a small chapel, in which a beautiful girl, about eighteen, was kneeling before an image of the Virgin, and holding in her hand an elegant bouquet of carnations. Suddenly the bells of some mules were heard, and the girl sprang from her knees and bent forward in the attitude of listening; the next moment one of the muleteers, a fine handsome young man, had entered the chapel, and the girl had thrown herself into his arms. He embraced her tenderly, and when she gave him her flowers, he put them in his bosom with as much reverence as he would have done if they had been the relics of a saint. They then again embraced each other with the utmost tenderness, and a moment after he had disappeared, and the girl was again kneeling before the Virgin, without a word having been spoken on either side."

It is rather singular that the true origin of the garden Pink has never been ascertained; as, though many botanists suppose it to spring from the same species as the Carnation, others derive it from a species they call *D. plumarius*, the native country of which is unknown.

#### 2.—THE DEPTFORD PINK. (*DIANTHUS ARMERIA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 317; 2nd ed., t. 614.

SPECIFIC CHARACTER.—Flowers aggregate, tufted. Bractæ lanceolate, downy, as long as the calyx. Petals serrated. (*Lind.*)

DESCRIPTION, &c.—This species is only found in gravelly soil, and generally on the borders of woods and in thickets. The plant grows from a foot to eighteen inches high, and the branches are terminated by clusters of small scentless flowers, of which there is seldom more than one in each cluster expanded at a time. The flowers are of a rose colour, with white dots. The plant is an annual.

#### 3.—THE MAIDEN PINK. (*DIANTHUS DELTOIDES*, *Lin.*)

SYNONYME.—*D. glaucus*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 61; 2nd ed., t. 617.

SPECIFIC CHARACTER.—Flowers solitary. Bractæ ovate-lanceolate,

acute, seldom more than two. Leaves bluish, somewhat downy.

Petals notched, smooth. (*Lind.*)

DESCRIPTION, &c.—This is a very handsome species, and it is the only one found wild in the north of England and Scotland. In the south of England it is very common in sandy soils, growing among grass or on hedge banks, close to the ground. The colour of the flowers varies very much in different plants, but there is always a circle of dark crimson dots, enclosing a white eye in the centre of the flower. There is a variety with white flowers, and glaucous leaves.

#### THE PROLIFEROUS PINK. (*D. PROLIFER*, *Lin.*)

This is a very rare species, having been found only in four places in Great Britain, one of which is Hampton Court. The flowers are of a dark purple, and have no beauty, as they are very small, and only one opens at a time.



1. Trapwort 2. Wild Carnation 3. Bladder Campion. 4. Sea Campion  
5. Berry-bearing Campion. 6. Variegated Catchfly.



THE MOUNTAIN PINK. (*D. cæsius, Smith.*)

This is a very handsome perennial species; but it is rare, as it is only found on the lime-stone rocks at Cheddar in Somersetshire. The flowers are large, of a pale-pink, and very fragrant.

## GENUS II.

THE SOAPWORT. (*SAPONARIA, Lin.*)

*Lin. Syst.* DECANDRIA DIGYNIA.

**GENERIC CHARACTER.**—Calyx tubular, five-toothed, naked at the base. Petals with claws the length of the calyx. Stamens ten. Stigmas two. Capsule one-celled. (*Dec.*)

**DESCRIPTION, &c.**—There is only one species in this genus which is a native of Britain. It is very closely allied to *Dianthus*; but all the species belonging to the latter genus have five little scales at the base of the calyx, which look like a second calyx on the outside of the other, and their petals are more or less fringed. Now the Soapwort is destitute of these calycine scales, and the petals are not fringed. The names of *Saponaria* and Soapwort have both the same meaning, and allude to the property of the plant of forming a soap-like lather with water. It is placed in the same Linnæan class and order as the *Dianthus*.

1.—THE COMMON SOAP-WORT. (*SAPONARIA OFFICINALIS, Lin.*)

**SYNONYME.**—*Bootia vulgaris, Neck.*

**ENGRAVINGS.**—Eng. Bot., t. 1060; 2nd ed., t. 613; and our *fig.*

**SPECIFIC CHARACTER.**—Calyx cylindrical. Leaves elliptic-lanceolate.

(*Smith.*)

1, in Pl. 17.

**DESCRIPTION, &c.**—This is a very handsome perennial, growing in many parts of England, but not found in Scotland. It generally grows in moist shady places, and attains the height of one or two feet, dividing into several stems, each of which bears a handsome panicle of blush-coloured flowers, which appear in August and September, and have a sweet but rather sickly smell. There is a very handsome variety, with double flowers, common in gardens.

## GENUS III.

THE CATCH-FLY. (*SILENE, Lin.*)

*Lin. Syst.* DECANDRIA TRIGYNIA.

**GENERIC CHARACTER.**—Calyx tubular, five-toothed, naked. Petals five, unguiculate, generally having scales at the throat, with a bifid limb. Stamens ten. Stigmas three. Capsules three-celled at the base, dehiscing at the apex with six teeth. (*Dec.*)

**DESCRIPTION, &c.**—This is such a very extensive genus that it is generally divided into sections, which depend upon the nature of the stem and branches. All the species have a sort of glutinous foam upon them, in which flies and other small insects are often entrapped; and hence the English name of Catchfly. The name of *Silene* is derived from *Silenus*, the god of drunkards, in allusion to the foam of the plants being somewhat like that which proceeds from the mouth of a man in the last stage of intoxication. These plants are placed in the Linnæan class Decandria, on account of their ten stamens; and in the order Trigynia, from their three styles.

§ 1.—*Stem racemose, occasionally somewhat forked.*

1.—THE VARIEGATED CATCHFLY. (*SILENE QUINQUEVULNERA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 86; 2nd ed., t. 623; and our *fig. 6*, in Pl. 17.

SPECIFIC CHARACTER.—Hairy. Petals roundish, entire. Flowers

lateral, alternate, erect, as well as the capsules. Calyx somewhat shaggy. (*Smith.*)

DESCRIPTION, &c.—This curious little plant has only been found near Croydon, near Worthing, and in Kent. It is an annual, and flowers from June till August, but will only grow on a sandy soil. The name of *quinquevulnera*, which signifies five wounds, alludes to the five blood-coloured spots which are in the centre of the flower.

THE ENGLISH CATCHFLY. (*S. ANGLICA*, *Lin.*)

This is an inconspicuous plant, with dingy white flowers.

§ 2.—*Stem forked; branches panicled.*

2.—THE BLADDER CAMPION. (*SILENE INFLATA*, *Smith.*)

SYNONYMS.—*Cucubalus Behen*, *Lin.*; *Lychnis Behen*, *Seop.*

ENGRAVINGS.—Eng. Bot., t. 164; 2nd ed., t. 620; and our *fig. 3*, in Pl. 17.

SPECIFIC CHARACTER.—Flowers copiously panicled, drooping. Petals cloven half-way down, mostly without scales. Calyx smooth, inflated, reticulated. Stem erect. Leaves ovate, acute. (*Smith.*)

DESCRIPTION, &c.—The Bladder Campion is a plant well known in corn-fields, and by the road-side, particularly in chalky or calcareous soils. The stem and leaves are of a bluish green, and the latter are somewhat fleshy; the calyx is beautifully veined with green and purple, and the flowers are of a pure white. It is a perennial plant, and flowers from June till September. The old writers on the fabulous history of flowers say that the Bladder Campion was formerly a youth named Campion, who was employed by Minerva to catch flies for her owls, to feed them during the day when they could not see any prey themselves; but Campion going to sleep instead of attending to his duty, he was changed by the offended goddess into this flower, which still retains in its form the bladder he used to keep his flies in, and which droops its flowers at night, when Minerva's birds, the owls, are most active.

3.—THE SEA-CAMPION. (*SILENE MARITIMA*, *With.*)

SYNONYMS.—*S. amœna*, *Huds.*; *S. uniflora*, *Roth.*; *S. inflata*  $\beta$ , *Hooker*; *S. inflata uniflora*, *Ottb.*

ENGRAVINGS.—Eng. Bot. t. 957; 2nd ed., t. 621; and our *fig. 4*, in Pl. 17.

SPECIFIC CHARACTER.—Flowers slightly panicled, or solitary, terminal.

Petals cloven, each with a cloven, acute scale. Calyx smooth, inflated, reticulated. Stem recumbent. Leaves lanceolate. (*Smith.*)

DESCRIPTION, &c.—This species is found in great abundance on the sea-coast in the south of England, particularly between Brighton and Shoreham, where the ground is so completely covered with it, that it looks like a white sheet. It is a perennial plant, and so nearly allied to the preceding species, as to be considered by some botanists to be merely a variety of it; but it is easily distinguished by its procumbent stems, the broadness of its petals, and the smallness of its leaves; besides which, the calyx is less inflated. This species is often found in inland situations, growing in the mountainous districts, in the bed of Alpine torrents.

§ 3.—*Stem and branches, if any, forked, leafy.*

4.—THE NIGHT-FLOWERING CATCHFLY. (*SILENE NOCTIFLORA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 291; 2nd ed., t. 627.

SPECIFIC CHARACTER.—Stem forked. Petals cloven, each with a | cloven, abrupt scale. Calyx with ten hairy ribs; its teeth linear, almost as long as the tube. (*Smith.*)

DESCRIPTION, &c.—This is an annual plant, growing from one to two feet high, and flowering in July. It is easily distinguished from the other species by the peculiar construction of its calyx, which is formed of ten hairy, connecting ribs. The petals are of a pale pink or white, and they are rolled inwards during the day, but expand at night, at which time the flowers become very sweet-scented. It is only found in sandy soils; but in such situations it is tolerably abundant, particularly in the neighbourhood of Lichfield, and in other parts of the midland counties of England, where the soil is sandy.

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THE CORN CATCHFLY. (*S. CONICA, Lin.*)

This is an annual plant, which is only found in Kent, in the vicinity of Sandown Castle; but it has grown there for the last hundred years, or more. The flowers are purple, but very small, and have no particular beauty; and the calyx is large, and tapering upwards from the base. It flowers in July. It takes its name from the curious, conical shape of the calyx. *S. conoidea, Lin.*, is supposed to be a variety of this species.

§ 4.—*Panicle forked, corymbose, leafless.*

5.—LOBEL'S CATCHFLY. (*SILENE ARMERIA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1398; 2nd ed., t. 628.

SPECIFIC CHARACTER.—Panicles forked, level-topped, many-flowered. Petals cloven, each with a double awl-shaped scale. | Calyx and leaves smooth. Capsule not longer than its stalk. (*Smith.*)

DESCRIPTION, &c.—This plant is very well known as a garden flower; and it is found occasionally wild in England on the hedge-banks of fields, and on old walls. It takes its name from L'Obel, a native of Flanders, who was botanist to James I. Armeria is the botanic name of the Thrift, which has its flowers in panicles, somewhat like those of this plant. The species is sometimes called the Wild Sweet William. It is an annual, and flowers in July and August.

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§ 5.—*Stem panicled, imperfectly forked.*

6.—THE NOTTINGHAM CATCHFLY. (*SILENE NUTANS, Lin.*)

SYNONYMS.—*S. paradoxa, Smith*; *Cucubalus viscosus, Huds.*

ENGRAVINGS.—Eng. Bot., t. 465; 2nd ed., t. 625.

SPECIFIC CHARACTER.—Panicle with drooping, unilateral, partly-

forked branches. Petals deeply cloven, with linear segments, and

acute, cloven scales. Leaves elliptic-lanceolate, downy. (*Smith.*)

DESCRIPTION, &c.—This species has received its popular name from its being particularly abundant near Nottingham. It is, however, found in various other parts of the kingdom, but always growing on limestone rocks at some distance from the sea. It is rather a gloomy-looking plant, but it has an elegant appearance from the graceful curl of its flower-stem. It bears some slight resemblance to the Sea Campion, but it is easily distinguished from that plant by its calyx not being bladdery. It is a perennial, and flowers in June and July.

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THE DOVER CATCHFLY. (*S. PATENS, Peete.*)

This is supposed to be a variety of the preceding species.

7.—THE SPANISH CATCHFLY. (*SILENE OTITES*, *Smith.*)SYNONYME.—*Cucubalus Otites*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 85; 2nd ed., t. 624.

SPECIFIC CHARACTER.—Panicle with tufted, somewhat umbellate,

upright branches. Flowers dioecious. Petals linear, undivided, naked.

Leaves spatulate, roughish. (*Smith.*)

DESCRIPTION, &c.—This is a very singular little plant; so extremely unlike the other species of the genus that no common observer would suppose that it belonged even to the same order. It has also the male and female flowers on different plants. It is a perennial, and grows in tufts; the flowering stems varying in height according to that of the grass among which they grow. The flowers appear in July and August.

§ 6. *Stem single flowered.*8.—THE MOSS CAMPION. (*SILENE ACAULIS*, *Smith.*)SYNONYME.—*Cucubalus acaulis*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 1081; 2nd ed., t. 629.

SPECIFIC CHARACTER.—Stems tufted, much branched. Leaves

linear, acute, fringed at the base. Stalks terminal, solitary, single-flowered. Calyx smooth. (*Smith.*)

DESCRIPTION, &c.—This lovely little plant grows in tufts like moss, but with beautiful rose-coloured flowers, on the summit of the highest mountains in Scotland. It is a perennial, and the flowers appear in June and July. There is a variety of this species in Scotland, the flowers of which are white.

GENUS IV.

THE CAMPION. (*CUCUBALUS*, *Lin.*)*Lin. Syst. DECANDRIA TRIGYNIA.*GENERIC CHARACTER.—Calyx five-toothed, inflated. Petals five, unguiculate; mouth naked. Berry one-celled, many-seeded. (*Smith.*)

DESCRIPTION, &c.—This genus is only distinguished from *Silene* by the berry-like fruit. The word *Cucubalus* was used by Pliny, but its exact meaning is not known.

1.—THE BERRY-BEARING CAMPION. (*CUCUBALUS BACCIFER*, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 1577; 2nd ed., t. 619; and our *fig. 5*, in Pl. 17.

SPECIFIC CHARACTER.—Leaves ovate, acute.

DESCRIPTION, &c.—This is a very doubtful native. It is a creeping-rooted perennial, with weak stems; and it produces its flowers in June and July.

GENUS V.

THE LYCHNIS. (*LYCHNIS*, *Lin.*)*Lin. Syst. DECANDRIA PENTAGYNIA.*GENERIC CHARACTER.—Calyx tubular, 5-toothed, naked. Petals five, unguiculate, usually with scales at the throat. Stamens, ten. Stigmas five. Capsule 1-5 celled. (*Dec.*)

DESCRIPTION, &c.—This genus is very nearly allied to *Silene*; and many of the species are called in English by the names of *Campion*, and *Catchfly*. The name of *Lychnis* signifies a flame, in allusion to the plants being generally flame-coloured. The genus is placed in the Linnæan class *Decandria*, on account of its ten stamens; and in the order *Pentagynia*, from its five styles.

1.—RAGGED ROBIN. (*LYCHNIS FLOSCUCULI*, *Lin.*)

SYNONYMES.—Cuckoo Flower; Meadow Lychnis.

ENGRAVINGS.—Eng. Bot., t. 573; 2nd ed., t. 664; and our *fig.* 4, in Pl. 18.SPECIFIC CHARACTER.—Petals in four linear segments. Capsule roundish, of one cell. Stem rough, with deflexed bristles. (*Smith.*)

DESCRIPTION, &c.—This species is one of the most common of the British flowers; and it is particularly abundant in moist meadows, where it flowers early in June. Notwithstanding the somewhat ragged appearance of its deeply cut petals, its flowers are very ornamental from their dark rose-colour. The stem is hairy, and covered with a glutinous moisture on the upper part. The following lines on this flower are by Miss Twamley:—

“A man of taste is Robinet,
A dandy, spruce and trim :
Whoe'er would dainty fashions set,
Should go and look at him.

Rob scorns to wear his crimson coat
As common people do,
He folds and fits it in and out,
And does it bravely too.”

Oh ! Robin loves to prank him rare,
With fringe and flounce, and all ;
Till you'd take him for a lady fair,
Just going to a ball.

Robin's a roguish, merry lad,
He dances in the breeze,
And looks up with a greeting glad
To the rustling hedge-row trees.”

2.—THE RED GERMAN CATCHFLY. (*LYCHNIS VISCARIA*, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 788; 2nd ed., t. 667; and our *fig.* 5, in Pl. 18.SPECIFIC CHARACTER.—Viscid. Petals slightly cloven. Capsule stalked, of five cells. Leaves fringed at the base. (*Smith.*)

DESCRIPTION, &c.—This very handsome species grows in the dry fissures of rocks. It is generally found in Scotland and Wales, but it is rare in the other parts of Great Britain. It grows in tufts, the stems being about a foot high. The flowers, which appear in May and June, are very ornamental: they are generally of a deep rose-colour, but sometimes they are of a pure white; and there are double-flowered varieties, of both colours, in the gardens. The cultivated varieties of this species are very suitable for rockwork.

3.—THE RED CAMPION. (*LYCHNIS SYLVESTRIS*, *Hoppe.*)SYNONYMES.—*L. dioica*, *Lin.*; *L. diurna*, *Sibth.*; *L. dioica rubra*, *Smith*; Bachelor's Buttons; Meadow Pink; Wild Sweet William.SPECIFIC CHARACTER.—Flowers red, usually dioecious, in dichotomous panicles. Petals half-cloven, with narrow diverging lobes. Capsules roundish, with recurved valves. Leaves ovate or lanceolate. (*Dec.*)

ENGRAVINGS.—Eng. Bot., t. 1579; 2nd ed., t. 665.

DESCRIPTION, &c.—This species is very common under hedges, or in any situation that is partially shaded, in all the clayey districts of Great Britain; but it is seldom found in chalky soils. The stems grow generally about two feet high; and the flowers, which are produced in panicles, are pink, and bear considerable resemblance to those of the Ragged Robin, except that their petals are not so deeply cut. There is a double-flowered variety, which is common in the gardens.

4.—THE WHITE CAMPION. (*LYCHNIS VESPERTINA*, *Sibth.*)SYNONYMES.—*L. dioica*, *Lin.*; *L. dioica alba*, *Smith*.

ENGRAVINGS.—Eng. Bot., t. 1580; 2nd ed., t. 666.

SPECIFIC CHARACTER.—Flowers white, dioecious, in dichotomous panicles. Petals half cloven, with broad converging lobes. Capsules conical, with erect valves. Leaves ovate. (*Dec.*)

SPECIFIC CHARACTER.—Flowers white, dioecious, in dichotomous

DESCRIPTION, &c.—This species was confounded by Linnæus, under the name of *Lychnis dioica*, with the Red Campion, though, to a common observer, no two plants can appear more distinct; the flowers of the Red

Campion, as before observed, closely resembling the flowers of Ragged Robin; while those of the White Campion resemble in shape, though not in colour, the flowers of the German Catchfly. The sole point in which the two plants correspond is, indeed, the peculiarity which made Linnaeus class them together, viz. that, in both, the male and female flowers are distinct. The White Campion is a much more robust plant than the Red. Its flowers are large, and either white, or of a pale blush; and they are fragrant in the evening, while those of the Red Campion are perfectly scentless. Its habits are also totally distinct from those of the Red Campion, as it is generally found in an open situation and on a chalky soil; whereas the Red Campion rarely grows on chalk, and is almost always found in a shady situation. Both species are perennials, and are frequently cultivated in gardens.

THE RED ALPINE CAMPION. (*L. ALPINA, Lin.*)

This species has only been found on the summits of some Scotch mountains; and it has, therefore, but very slender claims to be considered a British plant. The flowers are pink, but they possess very little beauty.

GENUS VI.

THE COCKLE. (*AGROSTEMMA, Lin.*)

Lin. Syst. DECANDRIA PENTAGYNYIA.

GENERIC CHARACTER.—Calyx somewhat campanulate, coriaceous, with five foliaceous segments. Stamens ten. Stigmas five. Capsule one-celled. (*Lindley.*)

DESCRIPTION, &c.—This genus is very nearly allied to Lychnis; the principal difference being, that the calyx in Agrostemma is leafy, and of a thicker substance than in Lychnis. The Linnaean class and order are the same in both genera. The word Agrostemma signifies crown of the field, and it is very appropriate to this plant, from its beauty and from its being generally found in corn-fields. The genus contains only one species that is a native of Britain.

1.—THE CORN COCKLE. (*AGROSTEMMA GITHAGO, Lin.*)

SYNONYMS.—*Lychnis Githago, Dec.*; *Githago segetum, Desf.*

ENGRAVINGS.—*Eng. Bot.*, t. 741; 2nd ed., t. 663; and our *Jig.* 2,

SPECIFIC CHARACTER.—Hairy. Calyx-teeth rising above the corolla.

Petals undivided, without teeth. (*Smith.*)

in Pl. 18.

DESCRIPTION, &c.—This is an annual plant, very common in corn-fields during the months of June and July; and which, for its beauty, is frequently cultivated in gardens. It is, however, no favourite with the farmer. As its round black seeds ripen about the same time as those of the corn, they are frequently gathered with it, and can scarcely be separated from it, even when it is sent to the miller. The whole plant is covered with long silky hairs, which render its stem and leaves soft to the touch. In Warwickshire this plant is called Honesty, though it is quite different from the plant known by that name in other parts of the kingdom.



1. Field Chickweed 2. Corn cockle 3. Great Stichwort
4. Ragged Robin. 5. German catchfly



II.—THE CHICKWEED TRIBE.

Sepals 4 or 5, distinct, or cohering only at the base.

GENUS VII.

THE STITCHWORT. (STELLARIA, *Lin.*)

Lin. Syst. DECANDRIA TRIGYNIA.

GENERIC CHARACTER.—Calyx five-parted. Petals five, bifid. Stamens ten, or by abortion 3—8. Stigmas three. Capsule of one cell, six teeth at the apex, and many seeds. (*Dec.*)

DESCRIPTION, &c.—This genus consists entirely of well-known weeds, all of which are perennials, with the exception of the common Chickweed, which was placed in a separate genus, called *Alsine*, by Linnaeus, though modern botanists include it in *Stellaria*. The genus is placed in the Linnaean class *Decandria* on account of its ten stamens; and in the order *Trigynia* on account of its three stigmas. All the species are small, straggling plants, with white flowers, most of which have the appearance of little stars, and hence the scientific name of the genus, *Stellaria*, which signifies a little star.

1.—THE GREAT STITCHWORT. (STELLARIA HOLOSTEA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 511; 2nd ed., t. 632; and our *fig. 3*, in Pl. 18. | SPECIFIC CHARACTER.—Leaves lanceolate, finely serrated. Petals inversely heart-shaped. Calyx without ribs. (*Smith.*)

DESCRIPTION, &c.—This species is very common in groves, and on hedge-banks by the roadside, during the months of May and June. The flowers are always of a brilliant white, but they vary considerably in size, according to the soil in which they grow. The plant has creeping, underground stems, which occasion it to spread rapidly; while its erect stems, though slender, are sufficiently rigid to keep the flowers always considerably above the grass, and thus to render them very conspicuous.

2.—THE GLAUCOUS MARSH STITCHWORT. (STELLARIA GLAUCA, *Withering.*)

SYNONYMS.—*S. palustris*, *Retz.*; *S. media*, *Sibth.*

ENGRAVINGS.—Eng. Bot., t. 825; 2nd ed., t. 634.

SPECIFIC CHARACTER.—Leaves linear-lanceolate, entire, glaucous.

| Flower-stalks partly scattered, erect. Calyx three-ribbed, half as long as the petals. (*Smith.*)

DESCRIPTION, &c.—This is a very handsome species, with flowers bearing considerable resemblance to those of the Great Stitchwort; but distinguished from it by its smooth, glaucous leaves, and ribbed calyx. The plant generally grows on the borders of ponds or ditches, but it is by no means common in every part of England. It is a perennial, and it flowers in June and July.

3.—THE COMMON CHICKWEED. (STELLARIA MEDIA, *Withering.*)

SYNONYME.—*Alsine media*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 537; 2nd ed., t. 631.

| SPECIFIC CHARACTER.—Leaves ovate. Stems procumbent, with a hairy alternate line on one side. Stamens from five to ten. (*Smith.*)

DESCRIPTION, &c.—There is perhaps no English weed that is more generally known than the common Chickweed; partly from its being an annual plant, which will spring up in any soil and situation, and which

appears to be in flower all the year ; and partly because cage-birds are very fond of its seeds, so that every one who has a canary or other singing bird is generally acquainted with the Chickweed better than almost any other British plant. The Chickweed varies very much in different soils and situations ; but it may always be distinguished from the other species of the genus by the remarkable, unilateral, hairy lines which run along its stem, from joint to joint alternately. It is said to be good for the table when boiled like spinach ; and all poultry are remarkably fond of it. It is interesting in this little weed, that it first gave Linnaeus an idea of what he has called the sleep of plants. In the evening the leaves approach in pairs, so as to enclose between their upper surfaces the tender buds of the plant ; and the two upper leaves but one have longer petioles than the others, so that they can close over the terminating leaves, and thus protect the end of the branch. The flowers, which are only expanded from nine o'clock in the morning till noon, also never unfold except in fine weather ; keeping themselves erect when they are open, but drooping when they close. After heavy rains they frequently remain closed for several days. This plant is found in almost every part of the world, and appears to grow equally well both in hot and cold climates, springing up with the greatest rapidity from seed, and producing plants which flower and ripen fresh seed the same season.

4.—THE BOG STITCHWORT. (*STELLARIA ULIGINOSA, Smith.*)

SYNONYMES.—*S. aquatica, Poll.*; *S. hypericifolia, Wiggers*; *S. Dilleniana, Leers*; *S. lateriflora, Krock*; *S. fontana, Jacq.*; *S. Alsine, W.*; *Larbrea aquatica, St. Hilaire*.

ENGRAVINGS.—Eng. Bot., t. 1074 ; 2nd ed., t. 635.

SPECIFIC CHARACTER.—Leaves elliptic-lanceolate, entire, with a callous tip. Flowers in an irregular dichotomous panicle. Petals shorter than the leaves of the calyx, which are united at the base. (*Smith.*)

DESCRIPTION, &c.—A little annual plant, of no beauty ; very common in ditches and rivulets in every part of England.

THE WOOD STITCHWORT. (*S. NEMORUM, Lin.*)

This is a very pretty perennial species, which is common in moist woods in Scotland, and the North of England. It flowers in May and June, and is distinguished from the other species by its petals being so deeply cut as to appear ten in number, instead of being only five ; while its leaves are broad, and generally cordate.

THE LESSER STITCHWORT. (*S. GRAMINEA, Lin.*)

This has the same peculiarity of deeply-cut petals as the last ; but it is distinguished by its narrow, grass-like leaves. It is a perennial, with a creeping, underground stem, and is common in every part of England. It flowers very abundantly in June and July.

THE MANY-STALKED STITCHWORT. (*S. SCAPIGERA, Willd.*)

This is a little perennial plant, found occasionally growing by the sides of rivulets on the Scotch mountains. Its flowers, which are of no beauty, are produced in June.

THE ALPINE STITCHWORT. (*S. CERASTOIDES, Lin.*)

This is a little perennial plant, with rather pretty flowers, which are produced in June. It is a native of the Highland mountains.

GENUS VIII.

THE MOUSE-EAR CHICKWEED. (CERASTIUM, *Lin.*)*Lin. Syst.* DECANDRIA PENTAGYNYIA.

GENERIC CHARACTER.—Calyx 5-parted. Petals 5, bifid. Stamens 10. Stigmas 5. Capsule 1-celled, cylindrical or globose, dehiscing at the point; teeth 10, circinate or ascending. (Dec.)

DESCRIPTION, &c.—Some of the species belonging to this genus have handsome flowers; but, in general, both flowers and plants are small and insignificant. The name of Cerastium is derived from *Keras*, a horn, in allusion to the form of the capsule; and the genus is placed in the Linnaean class Decandria from its ten stamens, and in the order Pentagynia from its five styles.

1.—THE FIELD CHICKWEED. (CERASTIUM ARVENSE, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 93; 2nd ed., t. 673; and our *fig. 1*, in Pl. 18.

SPECIFIC CHARACTER.—Stems ascending. Leaves lanceolate or

linear, acute, or rather blunt. Flowers in dichotomous panicles. Peduncles pubescent, with glands intermixed. Petals twice as long as the calyx. Capsule oblong, longer than the calyx. (Bentham.)

DESCRIPTION, &c.—This is by far the handsomest species of the genus, with the exception, perhaps, of the Alpine Chickweed. The Field Chickweed is common in fields and on hedge-banks in every part of England. It is a perennial, and it flowers nearly all the summer.

THE ALPINE CHICKWEED. (C. ALPINUM, *Lin.*)

This little plant has very large and handsome flowers, which appear in July and August, and are of a pure white. The species is found on the mountains of Scotland, and occasionally on those of North Wales.

THE COMMON MOUSE-EAR CHICKWEED. (C. VULGATUM, *Lin.*)

A very common and insignificant little weed.

There are several other species of the genus; but none that are remarkable either for their beauty or utility.

GENUS IX.

THE SANDWORT. (ARENARIA, *Lin.*)*Lin. Syst.* DECANDRIA TRIGYNYIA.

GENERIC CHARACTER.—Sepals 5. Petals 5, entire. Stamens 10, some of which are occasionally abortive. Stigmas 3. Capsule 1-celled, with 3 or 6 teeth at the apex, and many seeds. (Dec.)

DESCRIPTION, &c.—The plants contained in this genus are called Sandwort from their growing generally in dry, sandy situations, where few other plants could find nourishment. The name of Arenaria signifies literally sand-plant. The genus is placed in the Linnaean class Decandria from its ten stamens, and in the order Trigynia from its three stigmas. The species are all dwarf plants, with small and frequently inconspicuous flowers; but the seeds of many of them are very beautiful when examined with a microscope. The most interesting species are the following:—

THE PURPLE SANDWORT. (A. RUBRA, *Lin.*)

A very common species, growing abundantly on heaths, and dry pieces of waste ground. It is an annual

plant, and produces its small bright purple flowers in great abundance during the whole of the summer months.

THE SEA SPURREY. (*A. MEDIA*, *Lin.*)

A creeping, annual plant, with small purple flowers, and linear but fleshy leaves. It is common on the sea-coast in almost every part of Great Britain, and it flowers from June to September.

THE SEA CHICKWEED. (*A. PEPLOIDES*, *Lin.*)

A dwarf, perennial plant, with broad fleshy leaves and small white flowers, which it produces in June and July. It is common on the sandy sea-coast in every part of Great Britain.

THE THYME-LEAVED SANDWORT. (*A. SERPYLLIFOLIA*, *Lin.*)

A very pretty, dwarf, annual plant, with delicate little leaves, like those of the wild Thyme, and very small white flowers, which appear from May to July. This species is common on walls and pieces of waste ground in every part of Great Britain.

THE FRINGED SANDWORT. (*A. CILIATA*, *Lin.*)

This is the handsomest species of the genus, having rather large white flowers. It is, however, very rare, having only been found on a mountain in Ireland. It takes its specific name from the leaves being fringed with fine hairs.

There are several other species ; but they are insignificant weeds, with very small flowers ; and the Spring Sandwort (*A. verna*) is the only one at all likely to attract notice.

OTHER GENERA BELONGING TO THE ORDER CARYOPHYLLEÆ.

The principal of these are the Cyphel (*Cherleria*, *Lin.*), a dwarf herbaceous plant, with small white flowers, growing in tufts on the mountains in Scotland ; the Spurrey (*Spergula*, *Lin.*), a troublesome weed in corn-fields ; the Waterwort (*Elatine*, *Lin.*), a creeping annual plant, growing on the margins of ditches, but so small, both in leaves and flowers, as to be rarely observed ; Pearl-wort (*Sagina*, *Lin.*), a very small weed found in the neglected walks of gardens and between the interstices of the stones in paved courts ; Jagged Chickweed (*Holosteum*, *Lin.*), a rare and rather tender annual, with pink flowers ; and *Buffonia* and *Mœnchia*, which are insignificant annual weeds.

CHAPTER XV.

THE FLAX FAMILY. (LINEÆ, *Dec.*)

CHARACTER OF THE ORDER.—Sepals 3—4—5, with an imbricated aestivation, continuous with the peduncle, persistent. Petals equal in number to the sepals, hypogynous, unguiculate, with a twisted aestivation. Stamens equal in number to the petals, and alternate with them, united at the base in an hypogynous ring, from which proceed little teeth opposite to the petals, and indicating abortive stamens ; anthers ovate, innate. Ovarium with about as many cells as sepals, seldom fewer. Styles equal in number to the cells. Stigmas capitate.

Capsule generally pointed with the indurated base of the styles, many-celled ; each cell partially divided in two by an imperfect spurious dissepiment, and dehiscing with two valves at the apex. Seeds in each cell single, compressed, inverted ; albumen usually absent ; inner lining of the testa tumid. Embryo straight, with the radicle pointing towards the hilum ; cotyledons flat. Herbaceous plants, or small shrubs. Leaves entire, without stipule. Petals very fugitive. (*Lindley.*)

DESCRIPTION, &c.—The plants contained in this order have all very fugitive flowers ; and generally the seeds abound in mucilage, though the stems contain a considerable portion of woody fibre.

GENUS I.

THE FLAX. (*LINUM, Lin.*)*Lin. Syst. PENTANDRIA PENTAGYNYIA.*GENERIC CHARACTER.—Parts of the flower quinary. Sepals entire. Styles very seldom 3. (*Lindley.*)

DESCRIPTION, &c.—The genus *Linum* takes its name from the Celtic word *Llin*, a thread, in allusion to the use made of the fibres of the common Flax in making linen; the latter word being derived from *Linum*. The genus is placed in the Linnæan class and order Pentandria Pentagynia, from its having five stamens and five styles.

1.—THE COMMON FLAX. (*LINUM USITATISSIMUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1357; 2nd ed., t. 453; and our *fig.* 1, in Pl. 19. | SPECIFIC CHARACTER.—Sepals ovate, acute, with three ribs. Petals crenate. Leaves lanceolate, alternate. Stem mostly solitary. (*Lind.*)

DESCRIPTION, &c.—The common Flax is not only a useful plant, but a very beautiful one; and though it is supposed to have been originally introduced from Egypt, and not to be a true native of Britain, it has become so thoroughly naturalised as now to be included in every work published on British Wild Flowers. It is an annual plant, growing about a foot and a half high, and bearing its flowers, at the termination of its branches, in a sort of panicle. Almost every part of the plant is useful. The stems are steeped in water till the cellular part separates from the woody fibre, and the latter is in a fit state for being afterwards spun into thread. The seeds, which are called linseed, are sometimes ground and then pressed, to extract from them the oil that they contain; and sometimes used for poultices, or made into a mucilaginous drink for coughs, called linseed tea. The following lines, by Mrs. Howitt, give a pretty description of the general appearance of the plant:—

“ Oh, the little Flax-flower,
It groweth on the hill,
And be the breeze awake or asleep,
It never standeth still.

It groweth, and it groweth fast;
One day it is a seed,
And then a little grassy blade,
Scarce bigger than a weed.

Bnt then comes out the Flax-flower,
As blue as is the sky;
And 'tis a dainty little thing,
We say as we pass by.

Oh, 'tis a goodly little thing—
It groweth for the poor;
And many a peasant blesses it,
Beside his cottage door.”

2.—THE PERENNIAL BLUE FLAX. (*LINUM PERENNE, Lin.*)ENGRAVINGS.—Eng. Bot., t. 40; 2nd ed., t. 454; and our *fig.* 2, in Pl. 19.SPECIFIC CHARACTER.—Sepals obovate, obtuse, obscurely 5-ribbed, naked. Leaves linear-lanceolate. Stems numerous, ascending. (*Lindley.*)

DESCRIPTION, &c.—This plant is a true native of Britain, and it is found abundantly on chalky soils in every part of the kingdom. It is a perennial, and flowers nearly all the summer. It is very frequently cultivated in gardens; but it will seldom live long or flower well, unless there is some lime in the soil.

3.—THE NARROW-LEAVED FLAX. (*LINUM ANGUSTIFOLIUM*, *Huds.*)SYNONYME.—*L. tenuifolium*, *Withering.*ENGRAVINGS.—Eng. Bot., t. 381; 2nd ed., t. 455; and our *fig. 3*, in Pl. 19.SPECIFIC CHARACTER.—Sepals elliptical, three-ribbed, naked, pointed as well as the capsule. Leaves linear-lanceolate, with three ribs. Stems numerous. (*Lindley.*)

DESCRIPTION, &c.—This species is very nearly allied to the Common Flax, but it is a perennial with a woody root. It generally grows near the sea in the southern counties of England. It is, however, occasionally found in sandy and chalky soils in various parts of the kingdom. It flowers in July.

4.—THE PURGING FLAX. (*LINUM CATHARTICUM*, *Lin.*)

SYNONYME.—Mill mountain.

ENGRAVINGS.—Eng. Bot., t. 382; 2nd ed., t. 456; and our *fig. 4*, in Pl. 19.SPECIFIC CHARACTER.—Leaves opposite, obovate-lanceolate, panicle forked; partly drooping. Petals acute. (*Smith.*)

DESCRIPTION, &c.—This is a little, insignificant-looking, annual plant, with very small white flowers. It grows abundantly in almost every part of England where the soil is dry, and was formerly much valued for its medicinal properties. It flowers nearly all the summer.

THE FLAX-SEED. (*RADIOLA MILLEGRANA*, *Smith.*)

This little plant was formerly included in the genus *Linum*, but it was separated from it in consequence of the parts of its flowers being in fours instead of fives. It is generally found in sandy soils where the ground is moist; and it flowers in July and August, bearing, afterwards, an amazing number of little capsules of seeds, from which, in some places, it has obtained the popular name of All-seed.

CHAPTER XVI.

THE LIME-TREE FAMILY. (*TILIACEÆ*, *Juss.*)

CHARACTER OF THE ORDER.—Sepals four to five, with a valvular aestivation. Petals four to five, entire, with a little pit at their base. Stamens generally indefinite, hypogynous, distinct; anthers two-celled, dehiscing longitudinally. Disk formed of glands equal in number to the petals at the foot of which they are placed, adhering to the stalk of

the ovary. Ovary single, composed of from four to ten carpella; style one; stigmata as many as the carpella of the ovary. Fruit dry, of several cells. Seeds numerous. Embryo erect in the axis of fleshy albumen, with flat foliaceous cotyledons.—Trees or shrubs; seldom herbaceous plants. Leaves simple, stipulate, toothed. (*Lindley.*)

DESCRIPTION, &c.—The Lime-Tree is the only British plant included in this very small order.

GENUS I.

THE LIME-TREE. (*TILOA*, *Lin.*)*Lin. Syst. POLYANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx five-parted, deciduous. Petals five, with or without a scale on the inside. Stamens numerous, with distinct or somewhat polyadelphous filaments. Ovary with one style,

and five two-seeded cells. Fruit coriaceous, one-celled, with one or two seeds. Cotyledons sinuate.—Trees with a bark separating into distinct layers; and light wood. (*Lindley.*)

DESCRIPTION, &c.—There are four distinct kinds of Lime-Tree, natives of Great Britain; but the most common kind is that known by the name of *Tilia europaea*. Of the others, *T. grandifolia* is known by the large size of its leaves, and *T. parvifolia* by its leaves being very small; while *T. rubra* has cordate leaves, unequal at the base, and the petioles of a bright and shining, though somewhat greenish, red. The flowers of



1 Common Flax. 2 Perennial Flax. 3 Narrow-leaved Flax.
4 Purguing Flax. 5 Wood Sorrel. 6 Yellow Wood Sorrel.



the Lime-Tree, though inconspicuous from their small size and colour, which is a greenish-white, are remarkably sweet, and very attractive to bees. The wood is soft and light, but very durable; and from the ease with which it may be cut with a knife, it is generally used by carvers. Thus, the highly decorated frames of pictures, the wreaths of flowers which often ornament the door-cases and chimney-pieces of old mansions, and the beautifully cut wooden toys from the Tyrol, are all made of the wood of the Lime-Tree. The inner bark, which is remarkably tough and strong, separates readily into layers, and is woven into those large garden mats which are found so useful in protecting delicate plants from the cold during winter, and which are called bast-mats from bast being the Swedish word for bark. The family of Linnaeus are said to have derived their name from a gigantic Lime-Tree, that tree being called in German, *Linden*, and in Swedish, *Linn*. This genus is placed in the Linnean class Polyandria, and order Monogynia, from its flowers having numerous stamens, and only a single style. The flowers possess a great deal of mucilage, and they are used in France, in making a Ptisan, which is considered very efficacious in stopping the progress of a severe cold. The name of *Tilia* is said to be derived from a Greek word signifying a feather; and it is supposed to allude to the long, feathery membrane or bract which partially encloses the cymes of flowers.

CHAPTER XVII.

THE ACER FAMILY. (ACERINEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Calyx divided into five, or occasionally from four to nine parts. Petals equal in number to the lobes of the calyx, inserted round an hypogynous disk. Stamens inserted upon an hypogynous disk, generally eight, not often any other number; always definite. Ovarium two-lobed; style one; stigmas two. Fruit formed of two parts, which are indehiscent and winged; each one-

celled, with one or two seeds. Seeds erect, with a thickened lining to the testa. Albumen none. Embryo curved, with foliaceous wrinkled cotyledons, and an inferior radicle.—Trees. Leaves opposite, simple, without stipulæ. Flowers often polygamous, sometimes apetalous, in axillary corymbs or racemes. (*Lindley.*)

DESCRIPTION, &c.—The only genus in this order which contains British plants, is *Acer*.

GENUS I.

THE ACER. (ACER, *Lin.*)

Lin. Syst. OCTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Flowers polygamous. Calyx of five lobes or parts. Stamens seldom five, generally seven or nine. Leaves simple. (*Dec.*)

DESCRIPTION, &c.—There are only two kinds of *Acers* which are natives of Britain, viz. the Common Maple, (*A. campestre*, *Lin.*), and the Sycamore, (*A. Pseudo-Platanus*, *Lin.*). The Common Maple, is a dwarf, hedge-row tree, with small leaves and erect flowers, totally devoid of beauty; but the Sycamore is of majestic height, with large handsome leaves and drooping racemes of flowers, which though not ornamental in their colour, which is of a greenish yellow, are remarkable for their light and elegant appearance. The seed-pods of the Sycamore are well known by children, who call them keys in some parts of England, and cocks and hens in others. The botanical name of this kind of seed-pod is, however, *Samara*. The embryo has two very long, thin leaves, which are most curiously folded up so as to lie within the small space enclosed in the seed. These leaves appear above ground when the seed first begins to germinate; but they fall off on the appearance of the true leaves, which are of quite a different shape. There are several varieties of the Sycamore,

one of which has variegated leaves. The Syeamore is called the Plane Tree in Scotland, though it is quite different from the tree known by that name in England. The name of the genus, *Acer*, is derived from the Celtic word for sharp, in allusion to the hardness of the wood, which was employed by the Saxons for making the pointed staves which the serfs used in battle. The genus is placed in the Linnæan class Oetandria, on account of the eight stamens of its flowers; and in the order Monogynia, from their single style.

CHAPTER XVIII.

THE GERANIUM FAMILY. (GERANIACEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Sepals five, persistent, more or less unequal, with an imbricated aestivation; one sometimes saccate, or spurred at the base. Petals five, seldom four in consequence of one being abortive, unguiculate, equal or unequal, either hypogynous or perigynous. Stamens usually monadelphous, hypogynous, or perigynous, twice or thrice as many as the petals; some occasionally abortive. Ovarium composed of five pieces placed round an elevated axis, each one-celled, one-seeded; ovula pendulous; styles five, cohering round the elongated axis. Fruit formed of five pieces, cohering round

a lengthened indurated axis; each piece consisting of one cell, containing one seed, having a membranous pericarpium, and terminated by an indurated style, which finally curls back from the base upwards, carrying the pericarpium along with it. Seeds solitary, pendulous, without albumen. Embryo curved; radicle pointing to the base of the cell; cotyledons foliaceous, convolute and plaited. Herbaceous plants or shrubs. Stems tumid at the joints. Leaves either opposite or alternate; in the latter case opposite the peduncles. Stipules membranous. (Lindley.)

DESCRIPTION, &c.—This order contains only two genera of British plants, viz. *Geranium* and *Erodium*. The difference between these genera is very slight, and consists chiefly in the manner in which the carpels containing the seed separate from the axis to which they are attached. In the genus *Geranium*, the styles, which are smooth inside, curl up round and round, like the coil of a rope; while those of the *Erodium*, which are hairy inside, curl up spirally. There are also ten perfect stamens in the *Geranium*; while in the *Erodium*, only five of the stamens are perfect, and the other five are abortive.

GENUS I.

THE CRANE'S-BILL. (GERANIUM, *Lin.*)

Lin. Syst. MONADELPHIA DECANDRIA.

GENERIC CHARACTER.—Sepals five, equal. Petals five, equal. Stamens ten, fertile, alternately larger. Nectariferous glands at the base of the larger stamens. Indurated styles glabrous internally,

curling back from the axis, from the base to the point. Herbaceous plants with palmate lobed leaves, and one or two-flowered peduncles. (Lindley.)

DESCRIPTION, &c.—Most persons who are fond of flowers, are so accustomed, when they hear the name of *Geranium*, to picture to themselves handsome, half-shrubby, greenhouse plants, that they can hardly fancy the possibility of common British weeds being *Geraniums*; though they, in fact, have the greatest right to the name, nearly all the greenhouse *Geraniums* belonging to the genus *Pelargonium*. Some of the British *Geraniums*, or Crane's-Bills as they are usually called, have very handsome flowers, but others are insignificant weeds; and they are all either perennials or annuals. All the species are astringent in their qualities; and in all the stems are swollen at the joints and the leaves are palmately lobed. The word *Geranium* signifies literally Crane's-Bill. The genus is placed in the Linnæan class *Monadelphia*, from the filaments of the stamens adhering together at the base; and in the order *Decandria*, from its having ten stamens. The seed-pod consists of five carpels, each containing one seed, and each having a very long style, which adheres to the central axis. When the seeds are ripe, the seed-pod bursts, and the styles with the carpels attached curl up round the axis.

1.—THE DUSKY CRANE'S-BILL. (*GERANIUM PHÆNUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 322; 2nd ed., t. 965; and our *fig.* 3, in Pl. 20. | slightly pointed. Fruit keeled; hairy below; wrinkled at the summit. Stamens hairy. (*Smith.*)

SPECIFIC CHARACTER.—Stalks two-flowered, panicled, erect. Calyx

DESCRIPTION, &c.—This species is only found wild in thickets in the north of England; but it is often cultivated in gardens. The flowers vary in colour from a rich dark crimson to a purple; but they have always a dark hue, though they are glossy. The plant is a perennial, and it flowers in May and June. The stem grows about two feet high; it is much branched, and hairy. The leaves are alternate, deeply lobed, and strongly veined; and they are covered with a downy pubescence. The stipules and bracts are chaffy.

2.—THE MEADOW CRANE'S-BILL. (*GERANIUM PRATENSE, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 404; 2nd ed., t. 968; and our *fig.* 2, in Pl. 20. | deep segments, sharply pinnatifid and serrated. Fruit hairy all over. Stamens smooth, much dilated at the base. (*Smith.*)

SPECIFIC CHARACTER.—Stalks two-flowered. Leaves in about seven

DESCRIPTION, &c.—This very handsome species is common in moist, shady places in every part of England; and it is very often cultivated in gardens, where the flowers occasionally become double. The leaves differ from those of most of the other species in being first distinctly cut into five very deep lobes, and then each of these lobes being again cut into very deep, narrow segments. The flowers are very large and handsome, and the stems usually grow about two feet high. The species is a perennial, and it flowers in June and July.

3.—HERB ROBERT. (*GERANIUM ROBERTIANUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1486; 2nd ed., t. 971; and our *fig.* 6, in Pl. 20. | pedate, pinnatifid, five-angled. Calyx with ten angles. Fruit wrinkled, simply keeled. (*Smith.*)

SPECIFIC CHARACTER.—Stalks two-flowered. Leaves somewhat

DESCRIPTION, &c.—This is a little annual plant which is common in every part of England, and in almost every kind of soil and situation. It is particularly abundant on hedge-banks by the road-side, where it varies in colour, according to the soil in which it grows, from white to a deep rose-colour, or crimson, and sometimes even to purple. The leaves also vary in being more or less deeply cut, and in the breadth of their segments. The flowers are generally very pretty; but the plant has a disagreeable smell. Humble as this plant is, it has attracted the notice of a poet, and the following lines are abridged from a poem on the subject.

"There is a small but lovely flower,
With crimson star and calyx brown,
On pathway side, beneath the bower,
By Nature's hand profusely strown.

Inquire you when this flow'ret springs?—
When Nature wakes to mirth and love,
When all her fragrancee summer flings,
When latest autumn chills the grove.

And, should you ask me where it blows,
I answer, on the mountains bare,
High on the tufted rock it grows,
In lonely glens and meadows fair.

Oh! emblem of that steadfast mind,
Which, through the varying scenes of life,
By genuino piety refined,
Holds on its way 'midst noise and strife.

Though dark the impending tempest lour,
The path of duty it espies,
Calm 'midst the whirlwind and the shower,
Thankful when brighter hours arise.

Oh! could our darkened minds discern
In thy sweet form this lesson plain,
Could we it practically learn,
Herb Robert would not bloom in vain."

4.—THE DOVE'S-FOOT CRANE'S-BILL. (GERANIUM MOLLE, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 778; 2nd ed., t. 972; and our *fig.* 5, in Pl. 20.

SPECIFIC CHARACTER.—Stalks two-flowered, alternate, opposite to

the leaves, which are rounded, many-lobed, notched and downy. Fruit much wrinkled or smooth. Seeds without dots. (*Smith.*)

DESCRIPTION, &c.—This is a very common species, which grows abundantly on the road-sides in every part of the kingdom. It has a procumbent, spreading stem, and roundish leaves with very broad segments, which fold over each other, so as to make the large leaves near the root, at first sight, appear to be almost entire. The whole plant is covered with a soft pubescence, from whence it has received its specific name of Molle, which signifies soft. The name of Dove's-foot alludes to the shape of the stem-leaves. The species is an annual plant, and it produces its little pale pink flowers during the whole of the summer and autumn.

5.—THE MOUNTAIN CRANE'S-BILL. (GERANIUM PYRENAICUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 405; 2nd ed., t. 969; and our *fig.* 4, in Pl. 20.

SPECIFIC CHARACTER.—Stalks two-flowered. Petals twice the

length of the calyx. Leaves kidney-shaped, lobed. Fruit keeled, even, somewhat downy. Seeds without dots. (*Smith.*)

DESCRIPTION, &c.—This species, notwithstanding its name, is rarely found except in low, moist meadows, where it is a very troublesome weed, as when it has once established itself it is very difficult to eradicate it. The flowers, which are of a pale purple, are very numerous, and rather pretty. It is a perennial plant, and flowers in June and July.

6.—THE BLOOD-RED CRANE'S-BILL. (GERANIUM SANGUINEUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 272; 2nd ed., t. 977; and our *fig.* 1, in Pl. 20.

SPECIFIC CHARACTER.—Stems branched, ascending. Stalks single-

flowered. Leaves roundish, in five or seven deeply separated, lanceolate, three-cleft lobes. Fruit even; bristly at the summit. Seeds minutely wrinkled. (*Smith.*)

DESCRIPTION, &c.—This is an exceedingly ornamental plant, from its large, deep rose-coloured flowers, and very handsome leaves. In its wild state it is seldom found but on mountains, and generally only in a calcareous soil; but in gardens it will thrive and flower abundantly in almost any soil and situation. It is a perennial plant, and flowers in June and July.

7.—THE DWARF CRANE'S-BILL. (GERANIUM PROSTRATUM, *Cav.*)

SYNONYMES.—*G. sanguineum*, var., *Dec.*; *G. Lanestriense*, *Withering.*

SPECIFIC CHARACTER.—Stems dwarf, tufted, nearly simple, shaggy.

Stalk single-flowered. Leaves roundish, in three or five two- or three-lobed ovate divisions. Fruit even; bristly at the summit. Seeds minutely wrinkled. (*Lindley.*)

DESCRIPTION, &c.—This species, though it is frequently confounded with *G. sanguineum*, is yet very distinct. The stems are very short, and grow in tufts; the leaves are nearly round, and the lobes ovate; the flowers are large, and they are either white, or of a pale flesh-colour, with crimson veins. The plant is a perennial, with a very strong woody root; flowering from July to September. It has only been found wild in Lancashire.

THE KNOTTED CRANE'S-BILL. (*G. nodosum*, *Lin.*)

This very pretty plant is rather a doubtful native, but it is occasionally found wild in Cumberland, and the mountainous districts of the North of England; and it is a favourite plant in gardens, particularly on rock-work,



1. Blood-red Cranesbill. 2. Meadow Cranesbill. 3. Gumboro Cranesbill
4. Mountain Cranesbill. 5. Liver-foot Cranesbill. (H. W. H.)

from the abundance of its purplish-red flowers and the delicacy of its foliage, which is too abundant in many of the other species. It has a creeping stem, knotted at the joints, and sending up erect shoots, crowned with flowers.

THE WOOD CRANE'S-BILL. (G. SYLVATICUM, *Lin.*)

This is a very handsome species, closely resembling the Meadow Crane's-Bill, but with smaller flowers.

THE SHINING CRANE'S-BILL. (G. LUCIDUM, *Lin.*)

This is a very pretty little plant, with shining green leaves, edged with crimson, and bright red stems. The flowers are of a bright rose-colour, but they are very small. The plant is an annual, and it continues flowering all the summer.

There are several other annual species closely allied to the above, but with much smaller flowers.

GENUS II.

THE HERON'S-BILL. (ERODIUM, *L'Herit.*)

Lin. Syst. MONADELPHIA PENTANDRIA.

GENERIC CHARACTER.—Sepals 5, equal, not extended into a nectariferous tube. Petals 5, regular, or irregular. Stamens 10, monadelphous, of which five are sterile. Glands at the base of the sterile

stamens. Indurated styles bearded internally, twisted spirally when ripe. Herbaceous plants or under-shrubs, with lobed leaves, and peduncles usually bearing several flowers. (*Lindley.*)

DESCRIPTION, &c.—There are only three species in this genus which are natives of Great Britain, and of these the only two that are common are annuals. The genus is placed in the Linnæan class Monadelphia, on account of the adhesion of the filaments of the stamens; and in the order Pentandria, because only five of them are fertile. The name, *Erodium*, signifies Heron's-Bill.

1.—THE HEMLOCK-LEAVED HERON'S-BILL. (ERODIUM CICUTARIUM, *Smith.*)

SYNONYMES.—*Geranium cicutarium*, *Lin.*; Wild Geranium.

ENGRAVINGS.—Eng. Bot., t. 1768; 2nd ed., t. 962.

SPECIFIC CHARACTER.—Stems procumbent, hairy. Stalks many-

flowered. Leaves pinnate; leaflets simple, pinnatifid, eut.

Stamens simple. (*Smith.*)

DESCRIPTION, &c.—This very common little plant is found in great abundance by the road-side, and on waste places in every part of England where the soil is dry, and either sandy or gravelly. Its shoots are generally procumbent; but, in sheltered situations, they sometimes rise to the height of a foot or eighteen inches. The flowers are pinkish, but they vary in colour considerably; and sometimes they are nearly white and spotted at the base. The plant is an annual, and continues flowering nearly all the summer.

2.—THE MUSK-SCENTED HERON'S-BILL. (ERODIUM MOSCHATUM, *Smith.*)

SYNONYMES.—*Geranium moschatum*, *Lin.*; the Musk-scented Wild Geranium.

ENGRAVINGS.—Eng. Bot., t. 902; 2nd ed., t. 963.

SPECIFIC CHARACTER.—Stems depressed, hairy. Stalks many-flowered. Leaves pinnate; leaflets nearly sessile, elliptical, unequally

eut. Perfect stamens toothed at the base. (*Smith.*)

DESCRIPTION, &c.—This species so closely resembles the last, that it would be difficult to distinguish between them if it were not for the strong smell of musk which is discoverable in the present plant the moment it is touched. It likewise only occurs in elevated ground, where the soil is dry and somewhat sandy. It is an annual plant, and it flowers all the summer.

THE SEA-SIDE HERON'S-BILL. (E. MARITIMUM, *Smith.*)

This species is somewhat rare, and it is only found on gravelly or sandy sea-shores in the South of England. The flowers are small, and of a pale-red; but their petals fall almost as soon as they have expanded. It is a perennial, and flowers from May till October.

CHAPTER XIX.

THE WOOD-SORREL FAMILY. (OXALIDÆ, *Dec.*)

CHARACTER OF THE ORDER.—Sepals 5, sometimes slightly cohering at the base, persistent, equal. Petals five, hypogynous, equal, unguiculate, with a spirally twisted aestivation. Stamens 10, usually more or less monadelphous, those opposite the petals forming an inner series, and longer than the others; anthers 2-celled, innate. Ovarium with 5 angles and 5 cells; styles 5, filiform; stigmata capitate or somewhat bifid. Fruit capsular, membranous, with 5 cells, and from

5 to 10 valves. Seeds few, fixed to the axis, enclosed within a fleshy arillus, which curls back at the maturity of the fruit, and expels the seeds with elasticity. Albumen between earilaginous and fleshy. Embryo inverted, the length of the albumen, with a long radicle, and foliaceous cotyledons. Herbaceous plants, or under-shrubs. Leaves alternate, compound, sometimes simple by abortion. (*Lindley.*)

DESCRIPTION, &c.—This order contains only one genus of British plants.

GENUS I.

THE WOOD-SORREL. (OXALIS, *Lin.*)

Lin. Syst. DECADRIA PENTAGYNIA.

GENERIC CHARACTER.—Sepals 5, distinct, or united at the base. Petals 5. Stamens 10; filaments slightly monadelphous; the 5 exterior alternately shorter. Styles 5. Stigmata penicilled, or capitate. Capsule 5-cornered, oblong or cylindrical. (*Lindley.*)

DESCRIPTION, &c.—There are two species of this genus which are British plants, but only one that is common. The name of Oxalis is derived from *Oxys*, sharp or acid, in allusion to the qualities of the plant. Its English name of Wood-Sorrel, alludes to its usual place of growth being in woods, and its acidity, the Sorrel being a remarkably acid plant. The plant is placed in the Linnæan class Decandria, on account of its ten stamens; and in the order Pentagynia, from its five styles.

1.—THE COMMON WOOD-SORREL. (OXALIS ACETOSELLA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 762; 2nd ed., t. 661; and our *fig.* 5, in Pl. 19. ternate, inversely heart-shaped, hairy. Root of many sealy joints. Stamens all simple. (*Smith.*)

SPECIFIC CHARACTER.—Stalks radical, single-flowered. Leaves

DESCRIPTION, &c.—This is a most beautiful little plant, both in its flowers and leaves; the flowers being large and white, but delicately veined with purple, and the leaves being beautifully shaped, and tinged with red. The leaflets are, indeed, often purple beneath, and they droop at the approach of rain, and when the sun goes down at night. The flowers also fold up their petals in the evening;

“ shrinking from the chilly night
They droop and close, but with fair morning's touch
Rise on their stems all open and upright.”—*Montaigne.*

The seed-vessel, when ripe, bends downwards, so that it is completely hidden by the leaves; and hence, it

is frequently thought that the plant only occasionally ripens its seeds. Gisborne, in his *Forest Walks*, notices this peculiarity in the following lines:—

“ Wood-Sorrel hangs her cups,
Ere their frail form and streaky veins decay,
O'er her pale verdure; but parental care
Inelines the short'ning stems, and to the shade
Of closing leaves, her infant race withdraws.”

The Wood-Sorrel has a creeping root, or rather underground stem, which has a number of small tubers at the joints. The whole plant is strongly acid, and the poison called oxalic acid is made from the leaves, by soaking them in water till the fleshy part separates from the rest, as when this sediment is left to settle, a number of small crystals appear in it, which are the oxalic acid. The plant is a perennial, and it is found in woods and thickets in every part of England. The flowers generally appear in April and May.

2.—THE YELLOW WOOD-SORREL. (*OXALIS CORNICULATA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1726; 2nd ed., t. 662; and our fig. 6, in Pl. 19. | stalks in small umbels. Stipules united to the base of the foot-

stalks. (*Lindley.*)

SPECIFIC CHARACTER.—Stem branched, proeumbent. Flower-

DESCRIPTION, &c.—This plant is only found in the South and South-west of England, and it is extremely rare; being only found in very moist shady places. The flowers are very small and yellow; but the fruit is large. The plant is an annual, and it flowers from May till October.

CHAPTER XX.

THE BALSAM FAMILY. (*BALSAMINEÆ*, *A. Richard.*)

CHARACTER OF THE ORDER.—Sepals 2, deciduous, with an imbricate aestivation. Petals 4, hypogynous, cruciate, unequal; the lower elongated at the base into a spur. Stamens 5, hypogynous; the 3 lower standing opposite the petals, and bearing anthers with two perfect cells; the 2 upper placed in front of the upper petal, bearing anthers with either 2 cells or only one; filaments thickened at the apex; anthers partly connate, bursting lengthwise. Ovary single; style none; stigmas 5, either distinct or connate. Fruit capsular, with 5 elastic valves, and 5 cells formed by membranous projections of the placenta, which occupies the axis of the fruit, and is connected with the apex by 5 slender threads. Seeds numerous, suspended; albumen none; embryo straight, with a superior radicle, and plano-convex cotyledons. Succulent herbaceous plants. Leaves simple, opposite, or alternate, without stipulae. Peduncles axillary. (*Lindley.*)

DESCRIPTION, &c.—The only British plants contained in this order belong to the genus *Impatiens*.

GENUS I.

THE TOUCH ME NOT. (*IMPATIENS*, *Lin.*)

Lin. Syst. PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Anthers five, of which three are 2-celled, and two 1-celled. Stigmas five, united. Capsule long, taper, the valves rolling back from the base to the apex. (*Lindley.*)

DESCRIPTION, &c.—All the plants belonging to this genus are annuals, with succulent, semi-transparent stems and thin leaves. They are very impatient of drought, and droop if not regularly supplied with water. The names of *Impatiens* and *Touch Me Not*, both allude to the construction of the capsule, which, if touched when ripe, instantly bursts open, and its five valves curling back, its seeds are thrown to a considerable

distance. The genus is placed in the Linnæan class Pentandria, from its five stamens; and in the order Monogynia, from its single style. It is a curious circumstance relating to the plants belonging to this genus, that the seeds require to be always kept in a moist place; as, if they are ever suffered to become perfectly dry, they seldom vegetate.

1.—THE COMMON TOUCH ME NOT. (*IMPAETIENS NOLI-ME-TANGERE, Lin.*)

SYNONYME.—The Yellow Balsam.

ENGRAVINGS.—Eng. Bot., t. 937; 2nd ed., t. 327; and our *fig. 3*, in Pl. 21.

SPECIFIC CHARACTER.—Peduncles with 3 or 4 flowers shorter than

the leaves, and spreading beneath them. Flowers pendulous, their spur recurved at the apex. Leaves ovate, coarsely toothed. Joints of the stem tumid. (Dec.)

DESCRIPTION, &c.—This species is found on the borders of lakes and other large pieces of water; but particularly in Scotland, and in the North of England on the banks of the celebrated Wynander Mere. In its wild state, the plant has a very singular appearance, a number of fleshy roots proceeding from the lowest joint of the stem above-ground. The plant withers so rapidly if not kept moist, that it is impossible to gather it for a nosegay without its losing all its beauty before any of the other flowers have shown the slightest symptoms of beginning to fade. When cultivated in gardens, the plant becomes more durable; but even then its beauty is very short-lived. It is an annual, and flowers in July and August.

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THE COPPER-COLOURED TOUCH ME NOT. (*I. FULVA, Sow.*)

This species is a native of America, and though it has occasionally been found wild in England, it is supposed merely to have escaped from the gardens.

CHAPTER XXI.

THE KNOT-GRASS FAMILY. (*ILLECEBREÆ, R. Brown.*)

This order includes four genera of British plants, viz., the Strapwort, (*Corrigiola, Lin.*); the Rupture-wort, (*Herniaria, Lin.*); the Knot-Grass, (*Illecebrum, Lin.*); and the All-seed, (*Polycarpon, Lin.*); all of which are insignificant weeds, with very small flowers.

CHAPTER XXII.

THE TAMARISK FAMILY. (*TAMARISCINEÆ, Desv.*)

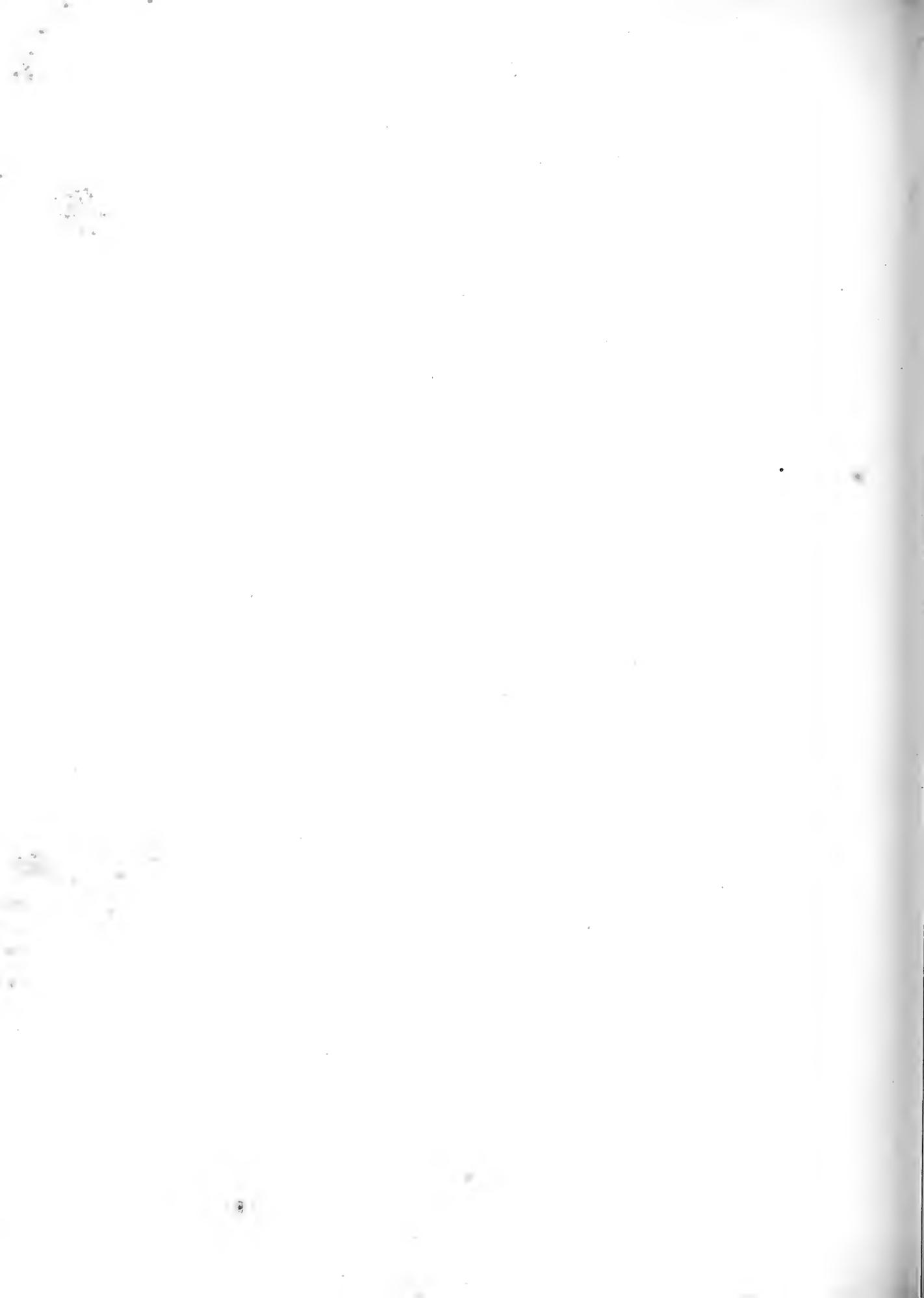
CHARACTER OF THE ORDER.—Calyx four or five-parted, persistent, with an imbricated aestivation. Petals inserted into the base of the calyx, withering, with an imbricated aestivation. Stamens either equal to the petals in number, or twice as many, either distinct or monadelphous. Ovarium superior; style very short; stigmata three. Capsule three-valved, one-celled, many-seeded; placentæ three, either

at the base of the cavity, or along the middle of the valves. Seeds erect, or ascending, comose; albumen none; embryo straight with an inferior radicle. Shrubs or herbs with rod-like branches. Leaves alternate, resembling scales, entire. Flowers in close spikes or racemes. (Lindley.)

DESCRIPTION, &c.—This order contains only one plant which is a native of Britain.



1 Common Navelwort 2 Yellow Navelwort 3 The Touch-me-not



## GENUS I.

THE TAMARISK. (TAMARIX, *Lin.*)*Lin. Syst.* PENTANDRIA TRIGYNYIA.

GENERIC CHARACTER.—Calyx 4-5 parted. Petals four or five. | straggling, glandular and oblique at the apex. Seeds inserted into the  
Stamens four or five, alternate with the petals, and almost entirely | base of the valves, or almost in the centre of the capsule. Coma of  
distinct. Ovarium tapering much to the point. Stigmas three, long, | the seeds consisting of numerous simple hairs. (*Lindley.*)

DESCRIPTION, &c.—This genus used formerly to include both the French and German Tamarisks; but the latter having been removed, it now contains only one species. The genus is placed in the Linnæan class Pentandria, from its five stamens; and in the order Trigynia, from its three stigmas. The name of Tamarix is said by Sir W. J. Hooker to be derived “from the *Tamarisci*, a people who inhabited the banks of the *Tamaris*, now *Tamra*, in Spain, where the Tamarisk abounds.”

1.—THE COMMON, OR FRENCH TAMARISK. (TAMARIX GALICA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1318; 2nd ed., t. 447.

SPECIFIC CHARACTER.—Lateral clusters numerous. Leaves lanceolate, spurred, acute. Branches smooth. (*Smith.*)

DESCRIPTION, &c.—No shrub stands the sea-breeze so well as the Tamarisk. In its native state it grows on the sea-coast of Cornwall and part of Devonshire; and even when cultivated, it may be planted close to the water's edge without running any risk of its being injured by the sea breeze. In July it produces its flowers in long spikes, which spring from the stalk below the leaves; the leaves only appearing at the termination of the branch.

## CHAPTER XXIII.

THE PURSLANE FAMILY. (PORTULACEÆ, *Juss.*)

There is only one British species in this order, and that is a little annual weed called Water Blinks, or Water Chickweed (*Montia fontana*, *Lin.*). The flowers are very small, and appear in April and May.

## CHAPTER XXIV.

THE HOUSELEEK FAMILY. (CRASSULACEÆ, *Dec.*)

CHARACTER OF THE ORDER.—Sepals from 3 to 20, more or less united at the base. Petals inserted in the bottom of the calyx, either distinct or cohering in a monopetalous corolla. Stamens inserted with the petals, either equal to them in number, and alternate with them, or twice as many, those opposite the petals being shortest, and arriving at perfection after the others; filaments distinct, subulate; anthers of 2 cells, bursting lengthwise. Hypogynous scales several, one at the base of each ovary, sometimes obsolete. Ovaria of the same

number as the petals, opposite to which they are placed around an imaginary axis; one-celled, tapering into stigmata. Fruit consisting of several follicles, opening by the suture in their face. Seeds attached to the margins of the suture, variable in number; embryo straight in the axis of the albumen, with the radicle pointing to the hilum. Succulent herbs or shrubs. Flowers usually in cymes, sessile, arranged unilaterally along the divisions of the cymes. (*Lindley.*)

DESCRIPTION, &c.—All the genera belonging to this order consist of succulent herbaceous plants, generally with showy flowers arranged in cymes, and fleshy leaves. The principal British genera are the Navelwort, the Stonecrop, and the Houseleek.

## GENUS I.

THE NAVELWORT. (UMBILICUS, *Dec.*)*Lin. Syst.* DECANDRIA PENTAGYNYIA.

GENERIC CHARACTER.—Sepals 5, cohering at the base. Petals which taper to the point, and are tipped each with a subulate style. cohering in a campanulate, 5-elelf corolla. Stamens 10, inserted —Herbaceous plants. Leaves fleshy, alternate, or growing in upon the corolla. Hypogynous scales 5, obtuse. Fruit in 5 parts, clusters. Flowers whitish or yellow. (*Lindley.*)

DESCRIPTION, &c.—This genus was formerly called *Cotyledon*; and the species are herbaceous perennials, growing upon walls and rocks in warm, moist situations. The genus is placed in the Linnæan class *Decandria*, on account of its ten stamens; and in the order *Pentagynia*, from its five styles. The name of *Umbilicus* signifies the navel.

1.—THE COMMON NAVELWORT. (UMBILICUS PENDULINUS, *Dec.*)SYNONYMES.—*Cotyledon umbilicus*, *Hudson*; Wall Pennywort.ENGRAVINGS.—Eng. Bot., t. 325; 2nd ed., t. 648; and our *fig.* 1, in Pl. 21.SPECIFIC CHARACTER.—Leaves peltate, notched. Flowers clustered, drooping. Bracteas entire. Root tuberous. (*Smith.*)

DESCRIPTION, &c.—This plant is very common in some parts of England, particularly in Somersetshire and Devonshire. It is generally found growing on old walls, or rocky banks, in moist, shady situations; as it appears to thrive best where it has warmth and moisture combined with shade. The stem grows from six inches to a foot long, and it is always of a pinkish or purplish hue. The flowers vary from a pure white to a yellowish green, and they appear from June till August. The leaves are extremely smooth, and of a thick, succulent texture; they are round, with the footstalk proceeding from the centre, and sometimes they are almost cup-shaped. It is this last peculiarity which gave rise to the first name of the genus; the word *Cotyledon* being derived from a Greek word signifying a cup.

2.—THE YELLOW NAVELWORT. (UMBILICUS ERECTUS, *Dec.*)SYNONYMES.—*Cotyledon lutca*, *Hudson*; Yellow Pennywort.ENGRAVINGS.—Eng. Bot., t. 1522; 2nd ed., t. 649; and our *fig.* 2, in Pl. 21.SPECIFIC CHARACTER.—Leaves deeply toothed; the lowermost slightly peltate. Flowers erect. Root creeping. (*Smith.*)

DESCRIPTION, &c.—This species is so very different from the last, that it is difficult to imagine it to be the same genus. It has, indeed, very much the appearance of a *Verbascum*. It is found upon walls and rocks in the West Riding of Yorkshire; but is very rare in every other part of England. It is a perennial plant, and it flowers in July.

## GENUS II.

THE STONECROP. (SEDUM, *Lin.*)*Lin. Syst.* DECANDRIA PENTAGYNYIA.

GENERIC CHARACTER.—Sepals five, cohering at the base, turgid, and often foliaceous. Petals five, spreading. Stamens ten. Hypogynous scales entire. Fruit in five parts.—Herbs with fleshy leaves, many branches, and cymose flowers. (*Lindley.*)

DESCRIPTION, &c.—All the plants belonging to this genus are perennials, with succulent stems and leaves. They have nearly all very showy flowers and small roots; and they grow usually upon rocks where there is scarcely any earth, and hence the name of *Sedum*, which is derived from *sedo*, I sit, in allusion to the manner



1 *Orpine* 2 *Common Houseleek* 3 *White Stonecrop* 4 *Welsh Rock Stonecrop*



in which these plants appear to be sitting on their native rocks, instead of growing out of them. The English name of Stonecrop, alludes to their growing generally on rocks or stones. This genus is placed in the same Linnæan class and order as *Umbilicus*.

§ 1.—*Leaves flat.*

1.—THE ORPINE. (*SEDUM TELEPHIUM, Lin.*)

SYNONYME.—Live Long.

ENGRAVINGS.—Eng. Bot., t. 1319; 2nd ed., t. 650; and our *fig. 1*, in Pl. 22.

SPECIFIC CHARACTER.—Leaves flattish, serrated. Corymb leafy.

Stem erect. (*Smith.*)

DESCRIPTION, &c.—This species is extremely common on the borders of fields, and on hedge-banks by the roadside, wherever the soil is gravelly or calcareous. Its flowers, which are very ornamental, vary from crimson to a dark purple, and are sometimes met with, white. They appear about the middle of July. The plant is a perennial, and it grows from one to two feet high. It was formerly thought very efficacious in curing wounds. Its popular name of Live Long, alludes to the length of time it may be kept out of the ground without injury.

2.—THE ROSE-ROOT. (*SEDUM RHODIOLA, Dec.*)

SYNONYMS.—*Rhodiola rosea, Lin.*; *Rhodiola odorata, Lam.*

ENGRAVINGS.—Eng. Bot., t. 508; 2nd ed., t. 1395.

SPECIFIC CHARACTER.—Leaves oblong, serrated at the tip, smooth.

Root fleshy. Stem simple. Flowers usually with four petals and divisions. (*Dec.*)

DESCRIPTION, &c.—This species was placed by Linnæus in a separate genus on account of the parts of the flowers being in fours; while the other species of the genus *Sedum* have ten stamens, and the other parts of their flowers in fives. The flowers of the Rose-root are also frequently diœcious, that is, some flowers have only stamens, and others only pistils; while those of the *Sedum* are always perfect. The plant is common in moist situations in the mountainous districts of both Great Britain and Ireland. The root is large and fleshy, with a grey, smooth, shining bark; and when it is dry it smells like roses. The leaves are numerous, fleshy, and growing close to the stem; they are serrated towards the point, and often tipped with crimson. The flowers are yellow, and they appear in June. The plant is a perennial, and it is the badge of the Highland clan Gunn.

§ 2.—*Leaves tumid, or somewhat cylindrical.*

3.—THE BITING STONECROP, OR WALL PEPPER. (*SEDUM ACRE, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 839; 2nd ed., t. 653.

SPECIFIC CHARACTER.—Leaves alternate, nearly ovate, thick, tumid; spurred at the base. Cyme of three smooth branches, leafy.

(*Smith.*)

DESCRIPTION, &c.—This is a dwarf plant, which grows abundantly on walls and dry sandy banks in almost every part of the United Kingdom, and which produces its golden yellow flowers about Midsummer. From its growing generally on walls, and its sharp acrid taste, it has received its popular English names of Biting Stonecrop and Wall Pepper. It is a perennial.

4.—THE TASTELESS STONECROP. (*SEDUM SEXANGULARE, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1946; 2nd ed., t. 654.

SPECIFIC CHARACTER.—Leaves in six or seven rows, nearly cylind-

drial, obtuse, fleshy, spreading; spurred at the base. Cyme of three smooth branches, leafy. (*Smith.*)

DESCRIPTION, &c.—This species is not nearly so common as the last; and though they are frequently confounded together, this kind may be easily distinguished by its larger and more spreading leaves, and the

comparative smallness of its flowers, which are also of a paler yellow. The plant is a perennial, and it flowers in July and August.

5.—THE WHITE STONECROP. (*SEDUM ALBUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1578; 2nd ed., t. 656; and our *fig. 3*, | SPECIFIC CHARACTER.—Leaves oblong, cylindrical, obtuse, spreading, in Pl. 22. smooth. Panicle much branched. (*Smith.*)

DESCRIPTION, &c.—This is by far the most beautiful British species of the genus. It is a creeping plant, spreading rapidly in all directions; but the flower stems are erect. It grows on rocks and walls, and on the roofs of houses, but generally only in sheltered situations that are somewhat moist. The leaves are of a glaucous green, tinged occasionally with red. The flowers, which are white, are also occasionally tinged with pink, and the anthers are of a bright red. The plant is a perennial, and it flowers in July.

6.—THE COMMON YELLOW STONECROP. (*SEDUM REFLEXUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 695; 2nd ed., t. 657.

SPECIFIC CHARACTER.—Leaves awl-shaped, scattered, spurred at the

base; the lowermost recurved. Flowers cymose. Segments of the calyx ovate. (*Smith.*)

DESCRIPTION, &c.—This is the commonest and the handsomest of the yellow-flowered Sedums, and it is very abundant on walls and thatched roofs in every part of Great Britain. It grows with long straggling stems, which spread over a considerable space, and send up numerous erect flower stems, growing from six to twelve inches high, each terminating in a large cyme of bright yellow flowers. These flowers, however, when closely examined, will be found to be very irregular in their construction, some of the flowers having only four petals, while others have six or seven; and some having only ten stamens, the regular number, while others have twelve, or even eighteen. The plant is a perennial, and it flowers in July.

7.—THE WELSH ROCK STONECROP. (*SEDUM FORSTERIANUM, Smith.*)

ENGRAVINGS.—Eng. Bot., t. 1802; 2nd ed., t. 660; and our *fig. 4*, | branches semi-cylindrical, bluntnish, pointed, spreading, in many rows. in Pl. 22. Flowers cymose. Segments of the calyx elliptical, obtuse. (*Smith.*)

SPECIFIC CHARACTER.—Leaves spurred at the base, those of the

DESCRIPTION, &c.—This very handsome species is found in Wales on moist rocks, particularly near waterfalls, growing in almost inaccessible situations.

“ Where men who’ve braved the cannon’s roar  
Are pale with speechless dread,  
The Stonecrop calmly mantles o’er  
Her rugged bed.”—*Francis.*

This species bears considerable resemblance to the last species; but it is distinguished by the bright green spreading leaves, which form dense clusters at the extremities of its branches. The flowers are also in a hemispherical cyme. The plant is a perennial, and it flowers in July.

THE ST. VINCENT’S ROCK STONECROP. (*S. RUPESTRE, Lin.*)

This very handsome species is distinguished from the other tall yellow Sedums by its closely-imbricated leaves, which are of a dark glaucous green. It is found on St. Vincent’s Rocks, near Bristol, and in other similar situations in Somersetshire; and on old walls near Darlington, in Yorkshire. It is a perennial, and it flowers in July.

There is another tall yellow Stonecrop, which is sometimes called *S. glaucum*, and sometimes *S. albescens*,

but which is probably only a variety of *S. reflexum*; and there are several species with small white flowers, one of which, called the white English Stonecrop, (*S. anglicum*,) is very abundant in the Highlands of Scotland, where its white flowers form a beautiful covering to rocks on which nothing else will grow.

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### GENUS III.

#### THE HOUSELEEK. (*SEMPERVIVUM, Lin.*)

*Lin. Syst. DODECANDRIA DODECAGYNYIA.*

**GENERIC CHARACTER.**—Sepals from six to twenty, slightly cohering at the base. Petals the same number, acuminate. Stamens twice as numerous as the petals. Hypogynous scales lacerated. Fruiting as many parts as there are petals.—Herbaceous perennial plants, or

shrubs; propagated by offsets arising from the axillæ of the leaves. Leaves thick, fleshy. Flowers in cymes, corymbs, or panicles, white, yellow, or purple. (*Lindley.*)

**DESCRIPTION, &c.**—There is only one species of this genus a native of Britain; though there are several found in other parts of the world, (particularly in Madeira and the Canary Islands,) which are remarkable for their beauty. The name of *Sempervivum* signifies to live for ever; and it alludes to the tenacity with which the common Houseleek appears to cling to life, and the difficulty that there is in destroying it. Even after a piece has been detached from its ordinary situation, and kept dry for a considerable time, it will grow again if dipped in water, and placed in a favourable situation for fixing its roots. In one case, I remember seeing a piece of Houseleek, that had been trampled upon, recover and grow vigorously when placed upon the damp roof of a shed. The botanical construction of this genus is very curious, and, though Linnaeus placed it in his class Dodecandria, which signifies having twelve stamens, it has sometimes double that number. It is also remarkable in being the only plant that has twelve styles. Modern botanists find its construction interesting, as it forms a curious illustration of the doctrine of the metamorphose of one part into another; as, besides the twelve perfect stamens, there are frequently twelve imperfect ones, and these are occasionally changed, or half changed into carpels containing abortive seed. It is called Houseleek, because it generally grows on the roofs of houses; and it was anciently called Sea-green, from the glaucous colour of its leaves.

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#### 1.—THE COMMON HOUSELEEK. (*SEMPERVIVUM TECTORUM, Lin.*)

**ENGRAVINGS.**—Eng. Bot., t. 1320; 2nd ed., t. 687; and our *fig. 2.* | **SPECIFIC CHARACTER.**—Leaves fringed. Offsets spreading. Edges in Pl. 22. of the petals hairy, entire. (*Smith.*)

**DESCRIPTION, &c.**—The Common Houseleek is found on every cottage roof where there is sufficient moisture to enable it to live; but it thrives with peculiar vigour where the roof is of thatch, particularly if it be partially decayed. It is one of the most useful plants in village medicine, particularly in that dreadful disease, cancer in the breast; and as it is also very useful in bruises, it is certainly valuable in country places, where a doctor is difficult to be obtained. The flowers are very pretty, and they appear in July, but they are rare, as many persons, who are well acquainted with the Houseleek, have never seen it in flower; and it consequently seldom produces seed, though it propagates itself rapidly by its numerous offsets. The specific name of *tectorum*, which signifies “of the roofs,” alludes to the situation in which the plant is generally found.

THE MOSSY TILLÆA. (*TILLÆA MUSCOSA, Lin.*)

This is a troublesome little weed on gravel walks in the neighbourhood of London. It is also found in great abundance on the sandy plains of Norfolk and Suffolk; and there, in autumn, its leaves take a pinkish tinge, which has rather a pretty effect. It is an annual, and it continues flowering nearly all the summer.

## CHAPTER XXV.

THE SAXIFRAGE FAMILY. (*SAXIFRAGEÆ, Juss.*)

**CHARACTER OF THE ORDER.**—Calyx either superior or inferior, of four or five sepals, which cohere more or less at their base. Petals five, or none, inserted between the lobes of the calyx. Stamens five to ten, inserted either into the calyx (perigynous), or beneath the ovary (hypogynous); anthers two-celled, bursting longitudinally. Disk either hypogynous or perigynous, sometimes nearly obsolete, sometimes annular and notched, rarely consisting of five scales. Ovary adhering to the calyx or distinct from it, usually consisting of two parts, cohering more or less by their face, but distinct at the apex; sometimes two-celled with a central placenta; sometimes one-celled

with parietal placentæ; rarely four or five-celled. Styles none. Stigmata sessile on the tips of the lobes of the ovary. Fruit generally a membranous one or two-celled capsule with two bractæ; rarely a four-celled four-valved capsule; sometimes a four-celled berry. Seeds numerous, very minute; usually with long hexagonal reticulations on the sides of a transparent testa. Embryo taper, in the axis of fleshy albumen, with the radicle next the hilum.—Herbaceous plants, often growing in patches. Leaves simple, either divided or entire, alternate, without stipulæ. Flower-stems simple, often naked. (*Lindley.*)

**DESCRIPTION, &c.**—This order formerly consisted of four genera, the Golden Saxifrage (*Chrysosplenium*), the Moschate (*Adoxa*), the Grass of Parnassus (*Parnassia*), and the genus Saxifrage; but modern botanists have divided the latter genus into four genera, three of which are new, and have removed *Adoxa* to the order Araliaceæ.

## GENUS I.

THE GOLDEN SAXIFRAGE. (*CHRYSSOPLIUM, Lin.*)

*Lin. Syst. DECANDRIA DIGYNIA.*

**GENERIC CHARACTER.**—Calyx four or five-parted, coloured inside. Petals none. Stamens eight or ten, short, perigynous. Disk annular. Styles two, spreading. Capsule inferior, of one cell, and two valves at the apex. Small succulent herbs, with reniform notched leaves, and green inconspicuous flowers. (*Lindley.*)

**DESCRIPTION, &c.**—There are only two species in this genus, both of which are pretty little weeds, with small yellow flowers; and the principal difference in the species is, that in one the leaves are opposite to each other, and in the other they are alternate. Both species are perennials, flowering from March to July; and both are creeping succulent plants, growing in moist shady woods. They are placed in the Linnaean class Decandria, though they have generally only eight stamens, instead of ten; and in the order Digynia, because the capsule has two styles. The name of *Chrysosplenium* is said to signify golden spleen, and to be given to the plant in allusion to its medicinal properties, though these have long since fallen into disrepute.

## GENUS II.

THE GRASS OF PARNASSUS. (*PARNASSIA, Lin.*)

*Lin. Syst. PENTANDRIA TETRAGYNIA.*

**GENERIC CHARACTER.**—Calyx five-parted, spreading. Petals five, ribbed, sometimes glandular. Stamens five. Disk consisting of five fleshy scales, opposite the petals, and often fringed with glands. Ovary superior, one-celled, with four parietal placentæ. Stigmas four, obtuse, opposite the placentæ! Capsule superior, or nearly so, of one cell and four valves. Seeds numerous, bordered.—Herbaceous plants, natives of boggy places. Roots fibrous. Leaves radical, entire. Stems simple, with one leaf, and one white flower. (*Lindley.*)

**DESCRIPTION, &c.**—There is only one species in this genus, and that is a very singular plant, which seems to have puzzled botanists as to what natural family they should place it in; some classing it with the Sun-Dew,



1. The Hairy London Pride 2. The Creamy London Pride.  
 3. The Broad-petaled Saxifrage. 4. Purple Mountain Saxifrage.



and others with the St. John's Wort. I have, however, followed Dr. Lindley, in placing it in the Saxifrage family. The genus is included in the Linnæan class Pentandria, on account of its five stamens; and in the order Tetragynia, from its four styles. *Parnassia* is from *Parnassus*; but why the plant is called Grass of Parnassus, is not stated.

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1.—THE COMMON GRASS OF PARNASSUS. (*PARNASSIA PALUSTRIS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 82; 2nd ed., t. 449; and our *fig. 4*, in Pl. 24.

SPECIFIC CHARACTER.—Leaves heart-shaped. Glands of each scale numerous. (*Lindley.*)

DESCRIPTION, &c.—This very curious plant is found in great abundance in the spongy bogs, or mosses, as they are called, in the North of England and South of Scotland. The plant is occasionally seen in marshy places in other parts of the kingdom, but it is comparatively rare. The stems are angular, growing from three inches to a foot high, and each terminating in a large white flower which at first sight looks almost like a white Anemone. On a closer examination it will be found that at the base of each of the five petals is a curious heart-shaped scale, fringed with globular-headed filaments, like those which border the leaves of the Sun-Dew. Most of the leaves spring from the root; but each flower-stalk has one leaf exactly the same as the radical ones, which grows about half way between the root and the flower. Both the leaves and the petals of the flowers are strongly and regularly veined. The plant is a perennial, and it flowers in August and September.

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GENUS III.

THE MARSH SAXIFRAGE. (*HIRCULUS, Haworth.*)

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*Lin. Syst.* DECANDRIA DIGYNIA.

|                                                                                                                                                                                       |                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| GENERIC CHARACTER.—Calyx 5-leaved, erect. Petals equal, with a 2-valved nectariferous furrow at their base. Stamens 10, hypogynous. Disk obsolete. Stigmas sessile, capitate. Capsule | superior, with 2 beaks and 2 cells. Stems simple. Leaves entire. Flowers yellow. ( <i>Lindley.</i> ) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|

DESCRIPTION, &c.—There is only one species in this genus, which has been separated from Saxifraga, on account of its stamens growing from beneath the capsule, instead of adhering to the calyx, and its petals having a curious nectariferous furrow at their base. The genus is placed in the Linnæan class Decandria, on account of its ten stamens; and in the order Digynia, from its two styles.

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1.—THE YELLOW MARSH SAXIFRAGE. (*HIRCULUS RANUNCULOIDES*, *Haworth.*)

SYNONYME.—*Saxifraga Hirculus*, *Lin.*

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|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| ENGRAVINGS.—Eng. Bot., t. 1009; 2nd ed., t. 599; and our <i>fig. 2</i> , in Pl. 24. | SPECIFIC CHARACTER.—Leaves lanceolate, blunt, naked. Sepals lanceolate, obtuse. Runners none. ( <i>Lindley.</i> ) |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|

DESCRIPTION, &c.—It is a singular fact, in the history of this plant, that though it is found abundantly in Lapland, and in the Arctic regions as far north as vegetation extends, yet in England it is never found farther north than Yorkshire. It spreads, indeed, in a kind of belt across the centre of the kingdom, and is not found at all in the southern counties. The general appearance of the flower is more like that of a buttercup than of a Saxifrage; though its golden yellow petals are marked with red dots at the base. The plant is a perennial, and it flowers in August.

## GENUS IV.

THE FEW-FLOWERED SAXIFRAGE. (LEIOGYNE, *Don.*)*Lin. Syst. DECANDRIA DIGYNIA.*

GENERIC CHARACTER.—Calyx 5-parted, erect. Petals equal. Stamens 10, perigynous. Disk obsolete. Capsule superior, with 2 cells. Seeds roundish.—Herbaceous plants, with simple stems,

DESCRIPTION, &c.—The plants included in this genus are some of the most beautiful kinds of Saxifrage; and they are distinguished by the leaves never having a cartilaginous border; the stems being either simple, or very slightly branched; and the flowers being either white or yellow. This genus is in the same Linnæan class and order as the last.

§ 1.—*Capsule long.*1.—THE YELLOW MOUNTAIN SAXIFRAGE. (LEIOGYNE AIZOIDES, *Lindley.*)SYNONYMES.—*Saxifraga aizoides*, *Lin.*; *S. autumnalis*, *Willd.*ENGRAVINGS.—Eng. Bot., t. 39; 2nd ed., t. 600; and our *fig. 3*, in Pl. 24.

SPECIFIC CHARACTER.—Stem decumbent at the base. Leaves

alternate, linear, with fringe-like teeth. (*Lindley.*)

DESCRIPTION, &c.—A pretty little plant which grows abundantly among the mountains of Great Britain and Ireland, wherever the soil is a black peat. The plant is a perennial, creeping over the rocks, and sending up numerous erect flower-stalks five or six inches high, on which the bright yellow flowers are produced nearly all the summer. The petals are somewhat wide apart, and their bright golden hue is spotted with crimson.

2.—THE WHITE MEADOW SAXIFRAGE. (LEIOGYNE GRANULATA, *Lindley.*)SYNONYME.—*Saxifraga granulata*, *Lin.*ENGRAVINGS.—Eng. Bot., t. 500; 2nd ed., t. 602; and our *fig. 1*, in Pl. 24.

SPECIFIC CHARACTER.—Leaves kidney-shaped, lobed. Stem panicled,

leafy. Root granulated. (*Lindley.*)

DESCRIPTION, &c.—This is one of the commonest species of the genus, particularly on gravelly and sandy soils. The flowers are large and of a clear white; and the root produces a number of small granular tubers, which appear above the ground, and which look more like large grains of some kind of corn than roots. The stem, which generally grows nearly a foot high, is covered with hairs which are rather glutinous to the touch. The leaves are somewhat succulent. This species is very much improved by cultivation, and there is a very handsome double-flowered variety of it in the gardens. It is a perennial, and flowers in May and June.

3.—THE DROOPING BULBOUS SAXIFRAGE. (LEIOGYNE CERNUA, *Lindley.*)SYNONYME.—*Saxifraga cernua*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 664; 2nd ed., t. 603.

SPECIFIC CHARACTER.—Leaves somewhat palmate, stalked. Stem

with aggregate, axillary bulbs. Petals obovate. (*Lindley.*)

DESCRIPTION, &c.—This is a very curious little plant, which is only found on the Scotch mountains, where it flowers from June till August. The stem is about three inches high, and it terminates in a single white flower; but in the axil of each leaf it bears a cluster of small bright red bulbs; and these bulbs, which have a very singular appearance, when ripe drop off, and falling on the ground, take root and produce new plants. The species is a perennial.

4.—THE ALPINE BROOK SAXIFRAGE. (*LEIOGYNE RIVULARIS*, *Lindley.*)SYNONYME.—*Saxifraga rivularis*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 2275; 2nd ed., t. 604.

SPECIFIC CHARACTER.—Leaves palmate, stalked; the uppermost spatulate. Stem with few flowers. Root fibrous. (*Lindley.*)

DESCRIPTION, &c.—This plant is only found in the Highlands of Scotland, near alpine brooks, or on the borders of waterfalls. It is a perennial, and produces its small white flowers from July to September.

§ 2.—*Capsule depressed.*5.—THE CLUSTERED ALPINE SAXIFRAGE. (*LEIOGYNE NIVALIS*, *Lindley.*)SYNONYME.—*Saxifraga nivalis*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 440; 2nd ed., t. 598.

SPECIFIC CHARACTER.—Leaves roundish-ovate, serrated; taper-

ing and entire at the base. Cluster dense, capitate, of few flowers. (*Lindley.*)

DESCRIPTION, &c.—This is an elegant little perennial which covers the summits of lofty mountains, both in Scotland and Wales, with tufts of leaves, which look like those of the daisy when not in flower. About July and August, however, every tuft of leaves sends up a stalk, which bears at its termination a cluster of pretty little flowers which are white, tinted with pink on the back, and with bright red anthers. This plant is often cultivated in gardens on rockwork; and in sheltered situations it flowers in March and April.

## GENUS V.

THE TRUE SAXIFRAGE. (*SAXIFRAGA*, *Lin.*)*Lin. Syst. DECANDRIA DIGYNIA.*

GENERIC CHARACTER.—Calyx 5-lobed, erect. Petals equal. Stems 10, perigynous. Disk obsolete. Capsule half inferior, with 2 cells. Stems generally branching and forming tufts, sometimes

simple. Leaves usually divided more or less. Flowers white or purple, seldom yellow. (*Lindley.*)

DESCRIPTION, &c.—The plants retained in the genus *Saxifraga* differ from those that have been separated from it principally in the capsule being half inferior, that is, partly below the rest of the flower; and the flowers being generally either single or corymbose. This genus is placed in the same Linnaean class and order as the last. The name of *Saxifraga* is from two Greek words signifying to break a stone, in allusion to the manner in which the roots of some of the species penetrate the fissures of rocks, and between stones.

1.—THE PURPLE MOUNTAIN SAXIFRAGE. (*SAXIFRAGA OPPOSITIFOLIA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 9; 2nd ed., t. 601; and our fig. 4, in Pl. 23.

SPECIFIC CHARACTER.—Branches single-flowered, clothed with opposite, imbricated, fringed leaves. Petals ovate. (*Smith.*)

DESCRIPTION, &c.—Perhaps no kind of British *Saxifrage* is better known than this, as it is very commonly grown in gardens on rockwork. In its native state it is found on rocks, among the mountains in Wales and Scotland, to which it forms a beautiful covering, from its long trailing branches being closely covered with evergreen leaves. It is a perennial, and its beautiful purple flowers appear in great abundance in February and March, as soon as they can make their way through the snow.

2.—THE TUFED SAXIFRAGE. (SAXIFRAGA CÆSPITOSA, *Lin.*)

SYNONYMES.—*S. grönlandica*, *Lin.*; *S. petrea*, *Withering*; *S. palmata*, *Smith*; *S. decipiens*, *Ehr.*; the Palmate Saxifrage.

ENGRAVINGS.—Eng. Bot., t. 455 and t. 794; 2nd ed., t. 607 and 607\*.

SPECIFIC CHARACTER.—Radical leaves crowded, 3- or 5-cleft, obtuse, veiny, fringed; lowermost undivided. Flowers from 1 to 5, or more. Fruit hairy. Calyx smoother, obtuse. Petals rounded, triple-ribbed. (*Lindley*.)

DESCRIPTION, &c.—This plant is a native of the highest mountains of Scotland and Wales; but it varies so much in different situations, that it has been called by several different names, which have been supposed to be distinct species. It is a perennial, and its flowers, which are of a yellowish white, are produced in May and June.

3.—THE MOSSY SAXIFRAGE, OR LADIES' CUSHION. (SAXIFRAGA HYPNOIDES, *Lin.*)

SYNONYME.—*S. condensata*, *Gmel.*

ENGRAVINGS.—Eng. Bot., t. 454; 2nd ed., t. 610.

SPECIFIC CHARACTER.—Radical leaves three or five-cleft; those of

the long, procumbent shoots undivided; all bristle-pointed and fringed. Segments of the calyx ovate, pointed. Petals obovate. Stigmas nearly smooth. (*Smith*.)

DESCRIPTION, &c.—This is a common species in every part of the United Kingdom, growing in the moist clefts of rocks, and on the borders of mountain lakes. There are several varieties of this species which are known by various names; and some botanists suppose that *S. cæspitosa* and its allies are only varieties of *S. hypnoides*. The latter species is a perennial, and flowers from May till July.

4.—THE BROAD-PETALED SAXIFRAGE. (SAXIFRAGA PLATYPETALA, *Smith.*)

SYNONYME.—*S. hypnoides*, var., *Hook.*

ENGRAVINGS.—Eng. Bot., t. 2276; 2nd ed., t. 609; and our *fig. 3*, in Pl. 23.

SPECIFIC CHARACTER.—Radical leaves five-cleft; those of the

trailing shoots three-cleft; lobes bristle-pointed. Segments of the calyx ovate, pointed, erect. Petals nearly orbicular, flat, with many lateral veins. (*Smith*.)

DESCRIPTION, &c.—This species is very abundant on Snowdon, and some of the other Welsh mountains. It is also frequently found in Scotland. It was supposed by Sir W. J. Hooker to be a variety of *S. hypnoides*. It is, however, very distinct from that plant; as, instead of covering the mountains like a carpet, it grows in distinct tufts. The segments of the leaves also are very narrow; and the petals much broader, and strongly veined. The plant is a perennial, and it flowers from May till July. When brought into a garden, it remains quite unaltered by cultivation, and produces plants from seed exactly resembling itself.

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THE RUE-LEAVED SAXIFRAGE. (S. TRIDACTYLITES, *Lin.*)

This is a curious little plant, which has a crimson hue from being covered all over with red glandular hairs. The flowers are of a pure white, but they are very small. They are produced in May and June.

THE MOSSY ALPINE SAXIFRAGE. (S. MOSCHATA, *Withering.*)

This little plant has a musky smell. It is a native of the Highlands of Scotland, where it produces its buff-coloured flowers in May and June. *S. muscoides* and *S. pygmaea* are either the same species, or closely allied varieties of it. *S. hirta* is supposed to be a variety of *S. cæspitosa*; and *S. affinis* and seven other kinds are considered to be either varieties of *S. hypnoides*, or so closely allied to it as to render it difficult to distinguish them.

THE UPRIGHT ALPINE SAXIFRAGE. (S. PEDATIFIDA, *Ehr.*)

This is a very distinct species from its upright habit of growth, its deeply-cut leaves, and its small flowers.



1 White Meadow-Saxifrage. 2 Yellow Marsh-Saxifrage. 3 Yellow Mountain-Saxifrage.
4 Grass of Parnassus. 5 The Willow Herb or Common Purple Loosestrife.

GENUS VI.

THE PANICLED, OR MANY-FLOWERED SAXIFRAGE. (ROBERTSONIA, *Haworth.*)*Lin. Syst. DECANDRIA DIGYNIA.*

GENERIC CHARACTER.—Calyx five-leaved, reflexed. Petals equal, or nearly so. Stamens ten, sub-hypogynous. Disk obsolete. Capsule superior, with two cells. Seeds globose. Stems branching and forming dense tufts. Leaves broad, notched, often cartilaginous at the edge. Flowers white or pink, rarely pale yellow. (*Lindley.*)

DESCRIPTION, &c.—The species belonging to this genus all bear considerable resemblance to the well-known London Pride. They are all pretty little plants, with branched flower-stems and very conspicuous stamens, with bright red anthers. The leaves are generally roundish, and they have frequently a margin of a clear transparent membrane round the edge.

1.—THE LONDON PRIDE, OR NONE-SO-PRETTY. (ROBERTSONIA UMBROSA, *Haworth.*)

SYNONYME.—*Saxifraga umbrosa*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 663; 2nd ed., t. 596.

SPECIFIC CHARACTER.—Leaves obovate, retuse, quite smooth, with

cartilaginous crenatures, when full-grown spreading. Petioles short, dilated. Pedicels few-flowered. (*Don.*)

DESCRIPTION, &c.—There are two varieties of this species, one of which is sometimes called *R. punctata*, and the other *R. serratifolia*. They are very abundant on the Irish mountains, but are seldom found wild in either England or Scotland. The name of London Pride alludes to this plant bearing the air of London better than most other alpine plants. It is a perennial, and flowers in June.

2.—THE HAIRY LONDON PRIDE. (ROBERTSONIA HIRSUTA, *Lindley.*)

SYNONYMS.—*Saxifraga hirsuta*, *Lin.*; the Hairy Saxifrage.

ENGRAVINGS.—Eng. Bot., t. 2322; 2nd ed., t. 595; and our figs. 1 and 2, in Pl. 23.

SPECIFIC CHARACTER.—Leaves oval, with acute serratures, roundish or cordate at the base, hairy on each side, when full-grown erect. Petioles very long, taper, villous. Pedicels long, one-flowered. (*Don.*)

DESCRIPTION, &c.—This is a very handsome species, though its general appearance so closely resembles that of the common London Pride, as to be scarcely distinguished from it, except by its leaves which stand erect, are hairy on both sides, and are without the cartilaginous margin. This species is also a perennial, and a native of Ireland, where it flowers in June. The Cream-Coloured London Pride, *R. Geum*, (our fig. 2, in Pl. 23.) is another species so closely allied to this as scarcely to be distinguished from it; except by its leaves, which are much smaller, and do not stand erect.

3.—THE STARRY SAXIFRAGE. (ROBERTSONIA STELLARIS, *Lindley.*)

SYNONYME.—*Saxifraga stellaris*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 167; 2nd ed., t. 597.

SPECIFIC CHARACTER.—Leaves elliptic, wedge-shaped, coarsely ser-

rated, tapering and entire at the base. Panicle corymbose, of few flowers. (*Smith.*)

DESCRIPTION, &c.—This is one of the prettiest little plants for rockwork that can possibly be imagined. The flowers are white and star-like, and the leaves are pinkish on the under side like those of the common London Pride. The plant is a perennial, flowering in June and July; but frequently continuing to produce fresh blossoms nearly all the summer. It is found abundantly wherever there are lofty hills or mountains in Great Britain and Ireland; but it always grows in moist places.

CHAPTER XXVI.

THE LYTHRUM FAMILY. (SALICARIE, Juss.)

CHARACTER OF THE ORDER.—Calyx monosepalous; the lobes with a valvate or separate aestivation; their sinuses sometimes lengthened into other lobes. Petals inserted between the lobes of the calyx, very deciduous. Stamens inserted into the tube of the calyx below the petals, to which they are sometimes equal in number; sometimes they are twice, or even thrice, and four times as numerous; they are seldom four; anthers versatile, 2-celled, opening longitudinally. Ovarium superior, 2 or 4-celled; style filiform; stigma usually capitate.

Capsule membranous, covered by the calyx, 1-celled, dehiscing either longitudinally or in an irregular manner. Seeds numerous, small, without albumen, adhering to a central placenta; embryo straight; radicle turned towards the hilum; cotyledons flat and leafy. Herbs, rarely shrubs. Branches frequently 4-cornered. Leaves opposite, seldom alternate, entire, without either stipulae or glands. Flowers axillary, or in spikes or racemes. (Lindley.)

DESCRIPTION, &c.—This order contains only two genera, viz., the common Willow Herb or Purple Loosestrife, and a little weed called Water Purslane.

GENUS I.

THE WATER PURSLANE. (PEPLIS, Lin.)

Lin. Syst. HEXANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx campanulate, with twelve lobes, of which six are broader than the rest and erect, the others subulate, spreading. Petals six, minute, fugacious. Stamens six, opposite the broader

lobes of the calyx. Capsule two-celled, many-seeded. Herbaceous with opposite or alternate leaves. Flowers axillary. (Lindley.)

DESCRIPTION, &c.—There is only one species in this genus. The word *Peplis* is derived from the Greek name for Purslane; to which this plant bears a great general resemblance, though it is botanically quite distinct. It is placed in the Linnaean class Hexandria, on account of its six stamens; and in the order Monogynia, from its single style; and it is one of the very few plants in that class and order which are not bulbs.

1.—THE COMMON WATER PURSLANE. (PEPLIS PORTULA, Lin.)

ENGRAVINGS.—Eng. Bot., t. 1211; 2nd ed., t. 465.

SPECIFIC CHARACTER.—Petals wanting, or scarcely visible. Leaves opposite, obovate, stalked. (Smith.)

DESCRIPTION, &c.—This is a little insignificant, creeping, annual weed, which is found abundantly in watery places on sandy or gravelly soils. It has somewhat fleshy leaves, and small red flowers which appear in July and August.

GENUS II.

THE PURPLE LOOSESTRIFE. (LYTHRUM, Lin.)

Lin. Syst. DODECANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx cylindrical, striated, with eight to twelve teeth, of which from four to six are broader than the rest and erect, the others smaller and spreading. Petals four or six, inserted in the orifice of the calyx, opposite the smaller lobes of the calyx.

Stamens situated in the middle or at the base of the calyx, twice as numerous as the petals, or occasionally fewer. Capsule oblong, two-celled, many-seeded, included in the calyx. Erect herbaceous plants. Leaves opposite. Stems square. Flowers purple, axillary. (Lindley.)

DESCRIPTION, &c.—The name of *Lythrum* is said to be derived from a Greek word signifying black blood, in allusion to the very dark colour of the flowers of some of the species. The genus is placed in the Linnaean class Dodecandria, from its twelve stamens; and in the order Monogynia, from its single style. Only two of the species are natives of Great Britain, and they are both only found in marshy places.

1.—THE WILLOW HERB, OR COMMON PURPLE LOOSESTRIFE. (*LYTHRUM SALICARIA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1061; 2nd ed., t. 682; and our *fig.* | SPECIFIC CHARACTER.—Leaves opposite, lanceolate; heart-shaped at 5, in Pl. 24. the base. Flowers in whorled leafy spikes. Stamens twelve. (*Smith.*)

DESCRIPTION, &c.—In every part of the kingdom where there is marshy land, roadside ditches, or shallow ponds, this plant may be found abundantly about July and August; and its tall stems, which grow three or four feet high, terminating in long spikes of beautiful purple flowers, are extremely ornamental in a landscape. The plant is called the Willow Herb, from its tall straight stems, with their long narrow leaves, bearing, when not in flower, a considerable resemblance to a plantation of osiers or basket willows. The flowers are very curiously formed, the petals having a somewhat ragged and crumpled appearance, and the stamens are in two series, six long and six short, all within the tube of the calyx. The plant is a perennial.

2.—THE HYSSOP-LEAVED LYTHRUM. (*LYTHRUM HYSSOPIFOLIUM*, *Sibth.*)

ENGRAVINGS.—Eng. Bot., t. 292; 2nd ed., t. 683.

SPECIFIC CHARACTER.—Leaves alternate, linear-lanceolate. Flowers axillary, solitary. Stamens six. (*Smith.*)

DESCRIPTION, &c.—A dwarf annual plant, which is only found in the eastern counties of England in partially dried up pools or other shallow stagnant water. It flowers in August.

CHAPTER XXVII.

THE BUCKTHORN FAMILY. (*RHAMNACEÆ*, *Lindley.*)

CHARACTER OF THE ORDER.—Calyx monophyllous, 4-5 cleft, with a valvate aestivation. Petals distinct, euculate, or convolute, inserted into the orifice of the calyx, occasionally wanting. Stamens opposite the petals. Disk fleshy. Ovarium superior, or half-superior, 2, 3, or 4-celled; ovules solitary, erect. Fruit fleshy, indehiscent, or dry, | separating in three divisions. Seeds erect; albumen fleshy, seldom wanting; embryo about as long as the seed, with large flat cotyledons, and a short inferior radicle. Trees or shrubs, often spiny. Leaves simple, alternate, very seldom opposite, with minute stipulæ. Flowers axillary or terminal. (*Lindley.*)

DESCRIPTION, &c.—There is only one genus in this order which contains British plants.

GENUS I.

THE BUCKTHORN. (*RHAMNUS*, *Lin.*)

Lin. Syst. PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx urceolate, 4-5-cleft. Petals wanting, | 4, distinct or united. Fruit fleshy, with 3 or 4, or in consequence of or emarginate. Anthers ovate, 2-celled. Disk thin, overspreading | abortion 2, fibrous indehiscent stones. (*Brongniart.*) the tube of the calyx. Ovarium superior, 3 or 4-celled. Styles 3 or

DESCRIPTION, &c.—The only two species of this genus which are natives of Britain, are the Common Buckthorn, and the Berry-bearing Alder; both shrubs, with inconspicuous flowers, and rather handsome berries. The name of *Rhamnus* signifies a branch, in allusion to the shrubs composing the genus having numerous branches. The genus is placed in the Linnaean class Pentandria, on account of its five stamens; and in the order Monogynia, from its single style.

1.—THE COMMON, OR PURGING BUCKTHORN. (*RHAMNUS CATHARTICUS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1629; 2nd ed., t. 335.

SPECIFIC CHARACTER.—Thorns terminal. Flowers four-eleft, dicecious. Leaves ovate, serrated. Stem erect. Berry with four seeds. (*Smith.*)

DESCRIPTION, &c.—The flowers of this plant are of a pale green, and they are consequently inconspicuous. The berries, however, are generally handsome, and they are of a rich black when ripe. The plant forms a hard, rigid bush, with numerous branches, which frequently terminate in a spine, and are thickly covered with large and rather rough leaves. The flowers appear in May or June; and the berries, which are used both in medicine and for a yellow dye, are ripe in September. The bark is employed in making sap-green. What are called French berries in the druggists' shops are very often only the berries of the Common Buckthorn, though they are sold as the fruit of another species of *Rhamnus* (*R. tinctorius*), which is a native of France. The Avignon berries, which are also used for dyeing, are said to be the fruit of *R. infectorius*; but it is probable that the berries of several kinds of *Rhamnus* are sold under that name. The best Avignon berries come from the Levant.

2.—THE BERRY-BEARING ALDER. (*RHAMNUS FRANGULA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 250; 2nd ed., t. 336.

SPECIFIC CHARACTER.—Thorns none. Flowers all perfect. Style simple. Leaves entire, smooth. Berry with two seeds. (*Smith.*)

DESCRIPTION, &c.—This is a dwarf shrub, seldom growing more than three or four feet high, but forming a bush with numerous forked branches, which are distinguished from those of the Purging Buckthorn, by having no thorns. The flowers, which are very small, appear in May, and are succeeded by the berries in July. The leaves bear considerable resemblance to those of the Alder, and hence the popular English name of the plant. The berries are said to be often substituted for those of the Common Buckthorn, but they are easily distinguished by having only two seeds instead of four. The Berry-bearing Alder is common in thickets in every part of England, but it is very rare in Scotland.

CHAPTER XXVIII.

THE HOLLY FAMILY. (*AQUIFOLIACEÆ*, *Dec.*)

CHARACTER OF THE ORDER.—Sepals four to six, imbricated in aestivation. Petals cohering at the base, hypogynous, imbricated in aestivation. Stamens alternate with the petals, inserted into the corolla; filaments erect; anthers adnate. Disk none. Ovarium fleshy, somewhat trunate, with from two to six cells; ovula solitary, pendulous, from a cup-shaped funieulus; stigma subsessile, lobed.

Fruit fleshy, indehiscent, with from two to six stones. Seed suspended, nearly sessile; albumen large, fleshy; embryo small, two-lobed, lying next the hilum, with minute cotyledons, and a superior radicle. Trees or shrubs. Leaves alternate or opposite, coriaceous. Flowers small, axillary, solitary or fascicled. (*Lindley.*)

DESCRIPTION, &c.—This small order only contains one British plant, viz., the common Holly, which is included in the genus *Ilex*. This order was formerly united to *Celastrineæ*, but has been separated from it on account of some important differences in the formation of the flowers and seed-vessels. Two of these differences, which may be noticed by any common observer, are, that in *Aquifoliaceæ* the flowers have no disk, and the stamens are inserted in the corolla; while in *Celastrineæ* the flowers have a very large disk, and the stamens are inserted in it.

GENUS I.

THE HOLLY. (*Ilex, Lin.*)*Lin. Syst. TETRANDRIA TETRAGYNIA.*

GENERIC CHARACTER.—Calyx four or five toothed, persistent. Petals four or five, either distinct, or cohering at the base. Stamens four or five, alternate with the petals. Ovarium four-celled. Stigmas nearly sessile, four or five, either distinct or united in one. Fruit fleshy,

containing four or five hard stones, each umbilicate at the apex, and containing one seed. Seed inverted; albumen fleshy; embryo in the apex. Evergreen trees or shrubs. Leaves coriaceous. Flowers sometimes polygamous. (*Lindley.*)

DESCRIPTION, &c.—The only British plant contained in the genus *Ilex* is the Common Holly; and an examination of its inconspicuous flowers will show the botanical student that they have four stamens and four styles; on which account the genus is placed in the Linnæan class and order *Tetrandria Tetragynia*, the word *tetra* signifying four. The origin of the word *Ilex* is not known; but the word Holly is supposed to be a corruption of *Holy*, which the plant was formerly called from its use in churches.

1.—THE COMMON HOLLY. (*ILEX AQUIFOLIUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 496; 2nd ed., t. 235; and our *fig. 1*, in Pl. 25.

SPECIFIC CHARACTER.—Leaves ovate, acute, spinous, and wavy. Flowers axillary, somewhat cymose. (*Smith.*)

DESCRIPTION, &c.—The Holly is one of the commonest British low trees, and one of the very few that are evergreen. This last quality renders it particularly useful for affording a shelter for birds during the winter months, when the berries afford food as the leaves do shelter. Birds, however, are not fond of Holly berries so long as they can get those of the Ivy, and on this account the Holly berries generally remain on the tree the greater part of the winter. The leaves of the Holly, as it is well known, when old, become rigid, and, from the sharpness of their spines, form an impenetrable barrier near the ground, which prevents the approach of any weasel, rats, or other vermin which might attack birds' nests and destroy the young birds. The upper leaves, on the contrary, which are more newly unfolded, are less rigid, and the spines are soft. This peculiarity in the Holly has given rise to the following lines by Southey:—

“ O reader ! hast thou ever stood to see
The Holly-tree ?
The eye that contemplates it well, perceives
Its glossy leaves
Order'd by an intelligence, so wise
As might confound the Atheist's sophistries.

Below a circling fence its leaves are seen
Wrinkled and keen ;
No grazing cattle through their prickly round
Can reach to wound ;
But as they grow where nothing is to fear,
Smooth and unarm'd the pointless leaves appear.

Thus, though abroad perchance I might appear
Harsh and austere,
To those who on my leisure would intrude
Reserv'd and rude ;
Gentle at home amid my friends I'd be,
Like the high leaves upon the Holly-tree.

And should my youth, as youth is apt, I know,
Some harshness show,
All vain asperities I day by day
Would wear away,
Till the smooth temper of my age should be
Like the high leaves upon the Holly-tree.

And as when all the summer trees are seen
So bright and green,
The Holly-leaves their fadeless hue display
Less bright than they ;
But when the bare and wintry woods we see,
What then so cheerful as the Holly-tree ?

So serious should my youth appear among
The thoughtless throng ;
So would I seem amid the young and gay
More grave than they ;
That in my age as cheerful I might be
As the green winter of the Holly-tree.”

The bark of the Holly is used for making bird-lime; and, as is well known, the Holly is employed at

Christmas for decking churches and houses. This custom is very ancient, and it is said it can be traced back to the time of the Druids. The flowers of the Holly, which are small and white, appear in May, and they are succeeded by the berries, which ripen in autumn, and remain on all the winter. The berries are of a bright scarlet when ripe; they are slightly fleshy on the outside, and each contains four seeds. The tree grows very slowly; its wood is remarkably hard and fine-grained; and its bark, from which bird-lime is made, is very smooth. The Holly is common in every part of England, and some of the largest native trees are probably those in the New Forest in Hampshire.

CHAPTER XXIX.

THE CELASTRUS FAMILY. (CELASTRINEÆ, *R. Brown.*)

CHARACTER OF THE ORDER.—Sepals four or five, imbricated, inscribed into the margin of an expanded torus. Petals inserted by a broad base, under the margin of the disk, with an imbricated aestivation. Stamens alternate with the petals, inserted into the disk, either at the margin or within it; anthers innate. Disk large, expanded, flat, closely surrounding the ovary, covering the flat expanded torus. Ovary superior, immersed in the disk and adhering to it, with three or four cells; cells one or many seeded; ovules ascending from the

axis, attached to a short funiculus. Fruit superior; either a three or four-celled capsule, with three or four septiferous valves; or a dry drupe with a one or two celled nut, the cells of which are one or many seeded. Seeds ascending, seldom inverted by resupination, either provided with an arillus or without one; albumen fleshy; embryo straight; cotyledons flat and thick, with a short inferior radicle. Shrubs. Leaves simple, alternate or opposite. Flowers in axillary cymes. (*Lindley.*)

DESCRIPTION, &c.—The plant from which this order takes its name is not a native of Britain, but of America; and the only British plant belonging to it is the *Euonymus*, or Spindle-tree.

GENUS I.

THE SPINDLE-TREE. (EUONYMUS, *Lin.*)

Lin. Syst. PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx 4-6 lobed, flat, with a peltate disk in the bottom. Petals 4-6, spreading, inserted in the disk. Stamens 4-6, inscribed into glands projecting from the disk, alternate with the petals. Style one. Capsule three or five celled, with three or five angles;

dehiscence loculicidal. Seeds from one to four, with a fleshy arillus. Embryo green, straight, in the axis of a fleshy albumen. Shrubs with square branches. Leaves generally opposite. Peduncles axillary. (*Lindley.*)

DESCRIPTION, &c.—The plants belonging to this genus are remarkable for the singular manner in which the seeds are suspended from the capsule by means of a fleshy arillus; both the capsule and the arillus being of brilliant colours and quite distinct. Two very different origins are given to the name of *Euonymus*; some botanists deriving it from two Greek words signifying a good name, and others from *Euonyme*, the mother of the Furies, in allusion to noxious effects produced by eating the fruit of the plant. The genus is placed in the Linnaean class Pentandria, on account of its five stamens; and in the order Monogynia, from its single style.

1.—THE COMMON SPINDLE-TREE, OR PRICKWOOD. (EUONYMUS EUROPÆUS, *Lin.*)

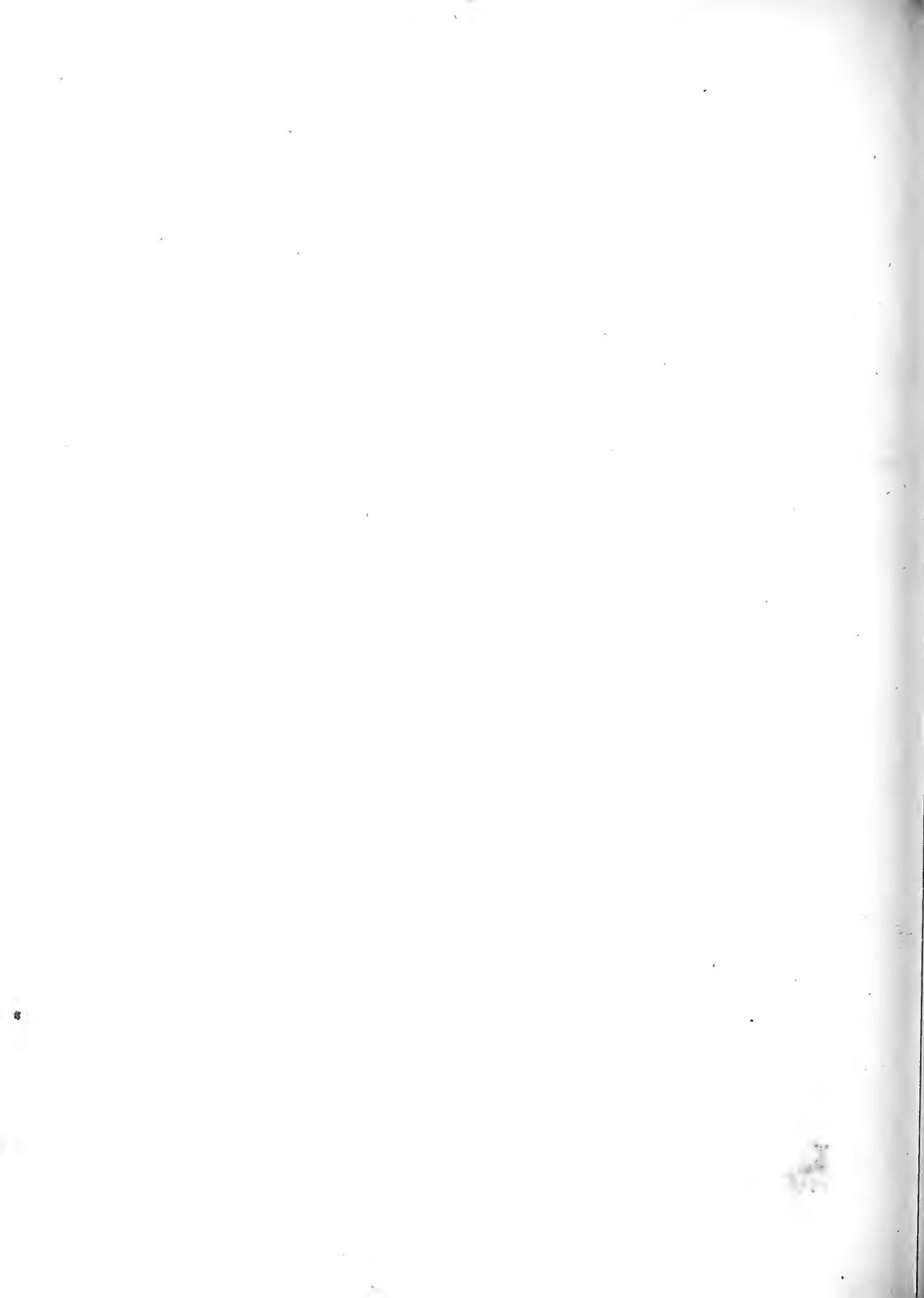
ENGRAVINGS.—Eng. Bot., t. 362; 2nd ed., t. 337; and our *fig. 2*, in Pl. 25.

SPECIFIC CHARACTER.—Flowers mostly 4-cleft. Petals acute. Branches smooth and even. (*Smith.*)

DESCRIPTION, &c.—This species is common in most parts of England, and in the South of Ireland, but it is seldom found in Scotland. The flowers appear early in May; but they are not at all ornamental, though the fruit is very much so, from its brilliant colours. There is, however, a variety with white fruit. The branches are



Common Holly & Common Spindle tree - the Bladder-herb



angular when young, but they become round and very smooth when old. The buds are remarkably long and sharply pointed. Every part of the plant when bruised has an unpleasant smell ; and both the leaves and fruit are said to be poisonous. The wood is remarkably hard and tough, and was formerly almost the only kind used for making spindles. It was also used for skewers, and hence the name of Prickwood ; skewers having been anciently called pricks. The leaves are often attacked, and their pulpy part devoured, by the caterpillars of the little Ermine Moth, hundreds of which, enclosed in a web, may often be seen on the leaves.

CHAPTER XXX.

THE BLADDER-NUT FAMILY. (STAPHYLEACEÆ, *Lindley.*)

CHARACTER OF THE ORDER.—Sepals five, connected at the base, colored, with an imbricated aestivation. Petals five, alternate, with an imbricated aestivation. Stamens five, alternate with the petals, perigynous. Disk large, urceolate. Ovarium two or three-celled, superior ; ovula erect ; styles two or three, cohering at the base. Fruit membranous or fleshy, indehiscent or opening internally, often

deformed by the abortion of some of the parts. Seeds ascending, roundish, with a bony testa ; hilum large, truncate ; albumen none ; cotyledons thick.—Shrubs. Leaves opposite, pinnate, with both common and partial stipulæ. Flowers in terminal, stalked racemes. (*Lindley.*)

DESCRIPTION, &c.—This order was formerly included in Celastrineæ, of which it formed a section ; but it has been separated from it and formed into a distinct order by Dr. Lindley. It now contains only one British plant.

GENUS I.

THE BLADDER-NUT. (STAPHYLEA, *Lin.*)

Lin. Syst. PENTANDRIA TRIGYNIA.

GENERIC CHARACTER.—Calyx five-parted, with an urceolate disk. Petals five. Ovarium two or three lobed. Styles two or three, sometimes combined. Fruit membranous, of two or three cells,

dehiscing internally. Seeds bony, roundish, truncate at the hilum.—Flowers large, white, in racemose panicles. (*Lindley.*)

DESCRIPTION, &c.—The name of *Staphylea*, which signifies a bunch, is well applied to this genus, the flowers of which are produced on short racemes, which grow in tufts or bunches. Two species of *Staphylea* are common in gardens, but only one of them is a native of Britain. The genus is placed in the Linnaean class Pentandria, on account of its five stamens ; and in the order Trigynia, from its three styles.

1.—THE COMMON BLADDER-NUT. (STAPHYLEA PINNATA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1560 ; 2nd ed., t. 446 ; and our *fig.* 3, in Pl. 25.

SPECIFIC CHARACTER.—Leaves pinnate. Styles and capsules but two. (*Smith.*)

DESCRIPTION, &c.—This very handsome shrub is generally considered a native of Britain, but it is very rare in this country ; the only places where it has been found, being at Pontefract, in Yorkshire, and in Kent. The flowers, which are of a kind of cream-colour, tinged with pink, are produced in May and June ; they are succeeded by bladder-like capsules, which are divided into two cells, though they never contain more than one seed. The seeds themselves are very curious ; they are extremely hard, and are of a shining brown, except at one end, where they appear to have been cut off abruptly, and they are quite white. They are sometimes bored and used for rosaries in the Roman Catholic countries. The name of Bladder-Nut alludes to the nut-like seed being enclosed in a bladdery capsule. The plant is also sometimes called the false Pistachio, from the oily nature of the seeds.

CHAPTER XXXI.

THE LEGUMINOUS FAMILY. (LEGUMINOSÆ, *Juss.*)

CHARACTER OF THE ORDER.—Calyx five-parted, toothed, or cleft, inferior, with the odd segment anterior; the segments often unequal, and variously combined. Petals five, or by abortion four, three, two, one, or none, inserted into the base of the calyx, either papilionaceous or regularly spreading; the odd petal posterior. Stamens definite or indefinite, perigynous, either distinct or monadelphous, or diadelphous; very seldom triadelphous; anthers versatile. Ovarium simple, superior, one-celled, one or many seeded; style simple, proceeding from the upper margin; stigma simple. Fruit either a legume or a drupa.

Seeds attached to the upper suture, solitary or several; occasionally with an arillus; embryo destitute of albumen, either straight or with the radicle bent upon the cotyledons; cotyledons either remaining under ground in germination, or elevated above the ground and becoming green like leaves.—Shrubs, trees, or herbaceous plants. Leaves compound, with stipulæ at the base of the petiole and of each leaflet. Petiole usually tumid at the base. Flowers axillary, either solitary, or in racemes or panicles. (*Lindley.*)

DESCRIPTION, &c.—This very extensive order contains so many genera, that it is necessary to make some subdivision in order to class them properly; and various subdivisions or sections have been suggested by different botanists. In the present work I shall adopt the arrangement of Dr. Lindley; according to which the whole order is divided into three sections, the distinctions between which depend partly upon the pods and partly on the cotyledons, or seed-leaves.

I.—THE LOTUS TRIBE.

All the plants belonging to this section have papilionaceous flowers; that is, flowers shaped like those of the common Pea. The stamens are either all joined together at the base, or the greater part of them are so joined, and only one, or at most two, left distinct. The pod is shaped like that of the common Pea; but it is sometimes divided into two, by a thin membrane in the centre. The cotyledons or seed-leaves rise above ground when the seeds germinate and become green, as may be seen in those of the common Lupine.

GENUS I.

THE FURZE. (ULEX, *Lin.*)

Lin. Syst. MONADELPHIA DECANDRIA.

GENERIC CHARACTER.—Calyx with two bracteæ, 2-lipped; the upper lip with three, the lower with two teeth. Stamens monadelphous. Pod oval-oblong, turgid, scarcely longer than the calyx, few-seeded.

Branching spiny shrubs. Flowers solitary, yellow. Pods villous. (*Lindley.*)

DESCRIPTION, &c.—It was formerly supposed that there were only two species of this genus natives of Britain; but latterly a third has been added, which is only found in Ireland. The genus is placed in the Linnaean class Monadelphus, on account of its stamens being united at the base; and in the order Decandria, from their number being ten. The name of Ulex is derived from a Celtic word signifying a sharp point, in allusion to the spiny nature of the plant.

1.—THE COMMON FURZE, WHIN, OR GORSE. (ULEX EUROPEUS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 742; 2nd ed., t. 990; and our *fig.* I, in Pl. 26.

Spines many-flowered, much recurved, and spreading. Young leaves rigid, furrowed, recurved. (*Lindley.*)

SPECIFIC CHARACTER.—Calyx shaggy, with two ovate lax bracts.

DESCRIPTION, &c.—The common Furze is abundant in every part of Great Britain, particularly where the soil is sandy or gravelly. The flowers appear in early spring, but are generally in perfection about May. The

plant is a shrub, growing from three to five feet high, and covered over with an amazing number of branched green spines, which are so numerous, as to prevent common observers from noticing the leaves, which are small, few in number, and soon fall off. The flowers, which are very abundant, appear among the spines ; and in the flowering season an elegant poet describes the plant as—

“the blossom'd Furze
With golden baskets hung. Approach it not,
For every flower has a troop of swords
Drawn to defend it. It is the treasury
Of fays and fairies.”—*Hurdis.*

Cowper describes it as—

“The prickly gorse, that, shapeless and deform'd,
And dangerous to the touch, has yet its bloom,
And decks itself with ornaments of gold.”

The Furze grows on the sea-coast close to the water's edge ; and not only remains uninjured, but flowers abundantly, even when washed by the spray of the sea. It is not found wild in Asia, Africa, or America, or even in the north of Europe ; but it grows to an enormous size in Spain, where plants have been known to attain the height of eighteen feet, with stems as thick as a man's leg. In Sweden and Russia it is kept in a greenhouse. The double-blossomed Furze is very ornamental in gardens. There is said to be a variety with white flowers, but it is extremely rare.

2.—THE DWARF FURZE. (*ULEX NANUS, Forster.*)

ENGRAVINGS.—Eng. Bot., t. 743 ; 2nd ed., t. 991 ; and our *fig.* | SPECIFIC CHARACTER.—Teeth of the calyx lanceolate, spreading. 2, in Pl. 26. Bracteas minute, close-pressed. Branches reclining. (*Smith.*)

DESCRIPTION, &c.—This plant is easily distinguished from the common Furze, not only by its dwarf stature, but by its flowering in winter instead of summer. Botanically it is distinguished by the calyx being downy, with very small bracts, instead of its being shaggy with large bracts ; and in the spines being one or two-flowered, instead of many-flowered.

THE IRISH FURZE. (*U. STRICTUS, Mackay.*)

This species is only found in the north of Ireland, and it differs decidedly from the common kinds in its upright habit of growth, and comparatively few flowers. Its spines also are so soft and succulent as to render its branches eatable by cattle, without any previous bruising ; though this is also the case with the English species when grown rapidly in a moist climate. Botanically the Irish Furze agrees with *U. europaeus* in its shaggy calyx ; and with *U. nanus* in its one or two-flowered spines. It flowers in June.

GENUS II.

THE GENISTA. (*GENISTA, Lin.*)

Lin. Syst. MONADELPHIA DECANDRIA.

GENERIC CHARACTER.—Calyx 2-lipped ; the upper lip two-parted, flat, compressed, or rather turgid, many-seeded, seldom few-seeded, not the lower three-toothed. Vexillum oblong. Keel oblong, straight, glandular. Shrubs with yellow flowers. (*Dec.*) not entirely restraining the stamens. Stamens monadelphous. Pod

DESCRIPTION, &c.—There are only three species of this genus which are natives of Great Britain, and they are all very common weeds. The name of Genista signifies a little bush. The Linnaean class and order are the same as those of the Furze.

1.—THE DYER'S GREENWEED, OR WOAD-WAXEN. (GENISTA TINCTORIA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 44; 2nd ed., t. 992; and our *fig.* 3, | SPECIFIC CHARACTER.—Leaves lanceolate, smooth. Branches round, in Pl. 26. striated, erect, without thorns. (*Smith.*)

DESCRIPTION, &c.—This well-known plant is common in every part of the kingdom. It has a creeping root, numerous stems and branches, and golden-yellow flowers, which appear in July and August. Farmers dislike the plant, and eradicate it whenever they can; as, when it grows in meadows and the cows eat it, it imparts a bitter flavour to the milk. It takes its name of Dyer's Greenweed from its having been formerly used in dyeing yellow, as the Woad was in dyeing blue; and as the two were employed to produce green, this plant was called Greenweed. Woad-waxen is supposed to have meant yellow Woad.

2.—PETTY WHIN. (GENISTA ANGLICA, *Lin.*)

SYNONYMES.—Needle Greenweed; Needle Furze.

ENGRAVINGS.—Eng. Bot., t. 132; 2nd ed., t. 994; and our *fig.* 4, | SPECIFIC CHARACTER.—Thorns nearly simple. Flowering branches in Pl. 26. unarmed. Leaves ovate-lanceolate. (*Smith.*)

DESCRIPTION, &c.—This little plant is common in every part of England, particularly on moist heaths. The stem is very much branched, and it is armed with very slender, and yet sharp spines. The leaves are of a bluish green, and very small. The flowers are of a bright yellow and somewhat racemose, and they appear in May and June. The pods are oval, and contain ten or twelve seeds.

THE HAIRY GREENWEED. (G. PILOSA, *Lin.*)

This plant only grows in Suffolk, Cornwall, and North Wales. The stem is very woody and much branched. The flowers are of a deep yellow, and are generally solitary or in pairs; but they are clustered at the extremities of the branches. The plant flowers in May, and often again in autumn.

GENUS III.

THE BROOM. (CYTISUS, *Lin.*)

Lin. Syst. MONADELPHIA DECANDRIA.

GENERIC CHARACTER.—Calyx two-lipped; the upper lip generally compressed, flat, many-seeded, without glands. Shrubs with yellow entire, the lower slightly three-toothed. Vexillum ovate, large. Keel flowers, and ternate leaves. (*Dec.*) very blunt, enclosing the stamens. Stamens monadelphous. Pod

DESCRIPTION, &c.—Only one species of this genus is a native of Britain; though some authors have supposed that the Scotch Laburnum (*Cytisus alpinus*) is a native of Scotland. This, however, does not appear to be the case, as young plants are only found growing wild in places where plantations are known formerly to have existed, and where they would naturally spring up from seeds. The name of Cytisus is supposed to be derived from *Cyhnus*, one of the Cyclades, in consequence of one of the first known of the species having been found there. This genus is placed in the same Linnæan class and order as Genista.



1 Common Furze. 2 Guay Furze. 3 Gorse Greenwood.
4 Head-waren. 5 Common Broom. 6 Shiny Bristle-Harrow.



1.—THE COMMON BROOM (*CYTISUS SCOPARIUS*, *Link.*)

SYNONYMS.—*Spartium scoparium*, *Lin.*; *Genista scoparia*, *Lam.*; 5, in Pl. 26.
G. hirsuta, *Mænch.* SPECIFIC CHARACTER.—Leaves ternate, or solitary. Branches
 ENGRAVINGS.—Eng. Bot. t. 1339; 2nd ed., t. 996; and our *fig.* angular, without thorns. Legume fringed. (*Lindley.*)

DESCRIPTION, &c.—The Broom is common in every part of Great Britain, and in fact it is found in dry, gravelly situations throughout Europe. It will, however, only grow in loose deep soils, as the roots are straight, and penetrate the ground perpendicularly. The leaves are small, and are scarcely seen amongst the numerous dark green branches. The Broom possesses a degree of historical interest, from Geoffrey of Anjou, father of Henry II., being in the practice of always wearing a sprig of it in his cap; and hence arose the name of Plantagenet, (from *genêt*, the French name of the plant,) which was borne by the English sovereigns, from Henry II. to Richard III. This historical fact has been alluded to in the following pretty lines addressed to the Wild Broom :—

“Afar from the cultured haunts of men,
 Where Nature has chanced thy seeds to fling,
 In the turf-cover'd wild, or the woodland glen,
 I've seen thee unfold, 'mid the blossoms of spring.

Time was, when thy golden chain of flowers
 Was link'd, the warrior's brow to bind;
 When rear'd in the shelter of royal bowers,
 Thy wreath with a kingly coronal twined.

The chieftain, who bore thee high on his crest,
 And bequeath'd to his race thy simple name,
 Long ages pass'd hath sunk to his rest,
 And only lives in the voice of fame.

And one by one, to the silent tomb,
 His line of princes hath pass'd away;
 But thou art here with thy golden bloom,
 In all the pride of thy beauty gay.”—*Wild Garland.*

The Broom is very common in Scotland, and it is found even on the summit of the Grampian Mountains, and as high as 1900 feet above the level of the sea. It is celebrated in many Scotch songs, particularly that beginning :—

“Oh! the Broom, the bonnie, bonnie Broom,
 The Broom of Cowden-knowes,
 For sure sac saft, sac sweet a bloom
 Elsewhere there never grows.”

And Burns notices it in one of the sweetest of his songs. It is also common among the mountains of Cumberland and Westmoreland; and Wordsworth makes it exclaim—

“On me such beauty summer pours,
 That I am covered o'er with flowers;
 And when the frost is in the sky,
 My branches are so fresh and gay,
 That you might look at me and say,
 This plant can never die.
 The butterfly, all green and gold,
 To me hath often flown,
 Here in my blossoms to behold
 Wings lovely as his own.”

In another place Wordsworth says :—

“ 'Twas that delightful season when the Broom
 Full flowered, and visible on every steep,
 Along the copses runs in veins of gold.”

The Broom is now the badge of the Highland Clan Forbes. When it grows to a large size, its wood is used in veneering. The flowers are large, and of a bright yellow, and they appear in May and June. The flower buds, when young, are sometimes pickled, and used as a substitute for capers.

GENUS IV.

THE REST-HARROW. (ONONIS, *Lin.*)*Lin. Syst. MONADELPHIA DECANDRIA.*

GENERIC CHARACTER.—Calyx campanulate, five-cleft, with linear segments. Vexillum large, streaked. Stamens monadelphous. Pod turgid, sessile, few-seeded.—Herbaceous plants or under-shrubs.

Leaves ternate, occasionally simple. Flowers axillary, yellow or purple. Pedicels often bearing a bristle indicating an abortive floral leaf. (*Lindley.*)

DESCRIPTION, &c.—The plants belonging to this genus, though small, are all more or less suffruticose; and they have all large handsome flowers, and very strong, deeply-seated roots, which offer so serious an obstruction to the labours of the farmer, as to give rise to the popular English name of Rest-Harrow, rest being an abbreviation of arrest or stop. The name of Ononis is said to be derived from *onos* an ass, because these plants are generally so prickly that none but asses will eat them. It is said, however, that among the ancients the young shoots were preserved in salt and vinegar, and eaten as a kind of pickle. This genus is placed in the same Linnæan class and order as the preceding genera.

1.—THE COMMON, OR TRAILING REST-HARROW. (ONONIS PROCURRENS, *Dec.*)SYNONYMES.—*O. arvensis*, *Smith*; *O. repens*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 2659; 2nd ed., t. 995.*

SPECIFIC CHARACTER.—Stem procumbent, spreading, rooting, unarmed; flowering branches ascending, hairy all over. Lower leaves

ternate, upper ones simple; all roundish-oval or oblong, serrated, and clothed with glandular hairs. Lobes of the calyx rather longer than the legume. (*Smith.*)

DESCRIPTION, &c.—This very beautiful little plant is found in great abundance upon sandy heaths and other places, wherever the soil is sufficiently loose to admit of being penetrated by its long deep roots. It is a very beautiful little plant, with pink flowers growing close to the ground, but with long trailing stems. It is half-shrubby, but dies down to the crown of the root every winter. It flowers from June to September.

2.—THE THORNY REST-HARROW. (ONONIS SPINOSA, *Dec.*)SYNONYMES.—*O. arvensis*, var., *Hook.*; *O. antiquorum*, *Lin.*; *Camomock*; *Ground Furze*.ENGRAVINGS.—Eng. Bot., t. 682; 2nd ed., t. 995; and our *fig.* 6, in Pl. 26.SPECIFIC CHARACTER.—Stem nearly erect, spinous; flowering branches (sometimes) with one or two distinct rows of hairs. Leaves ternate, oblong, wedge-shaped, and entire towards the base. Lobes of the calyx shorter than the legume. (*Smith.*)

DESCRIPTION, &c.—This very handsome plant grows abundantly in all barren places where the soil is deep and sandy. It produces its large, handsome, rose-coloured flowers from June to September; and, like the preceding species, it dies down to the crown of the root in winter. It is very nearly allied to the last species, only the stems grow erect and are decidedly thorny.

GENUS V.

THE KIDNEY-VETCH, OR LADIES' FINGER. (ANTHYLLIS, *Lin.*)*Lin. Syst. MONADELPHIA DECANDRIA.*

GENERIC CHARACTER.—Calyx tubular, five-toothed, persistent, more or less inflated. Wings, keel, and vexillum nearly equal. Stamens monadelphous. Pod ovate, one or two seeded, very seldom many-

seeded, always covered by the calyx.—Herbaceous plants or under-shrubs, of various habits. (*Lindley.*)

DESCRIPTION, &c.—Only one species of this genus is a native of Britain. The word Anthyllis signifies a downy flower, in allusion to the down upon the calyx. It is placed in the same Linnæan class and order as the preceding genera. The English name of Ladies' Finger, alludes to the shape of the seed-pods.



1 Common Kidney Vetch, or Ladies' Finger. 2 Purple Mountain Vetch.
3 Yellow Vetch.

1.—THE COMMON KIDNEY-VETCH. (*ANTHYLLIS VULNERARIA*, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 104; 2nd ed., t. 997; and our *fig.* 1, in Pl. 27.SPECIFIC CHARACTER.—Herbaceous. Leaves pinnate, unequal. Heads of flowers in pairs. (*Smith.*)

DESCRIPTION, &c.—The Common Kidney-Vetch has generally a large head of yellow flowers; but there are varieties of it, found chiefly in Wales and Scotland, the flowers of which are red or white. The heads of flowers are very much crowded, and are in somewhat of a kidney-shape. The plant is a perennial, and only grows in dry chalky soils. Cattle are said to be very fond of it as herbage. The flowers are produced from June till September. The plant was formerly considered an useful styptic, and hence the name of *vulneraria*, which signifies good for wounds.

GENUS VI.

THE MILK-VETCH. (*ASTRAGALUS*, *Lin.*)*Lin. Syst.* DIADELPHIA DECANDRIA.

GENERIC CHARACTER.—Calyx 5-toothed. Corolla with an obtuse | suture being turned inwards. Herbaceous plants or small shrubs, keel. Stamens diadelphous. Pod 2-celled, or half 2-celled, the lower | with pinnate leaves. (*Dec.*)

DESCRIPTION, &c.—The plants belonging to this genus are mostly herbaceous, and the flowers are purple, pale yellow, or white. There are only two species common in England, though a third kind has been found in Scotland. The name of Astragalus signifies the vertebræ, in allusion to the knotted roots of some of the species, which look like joints. It is placed in the Linnæan class and order Diadelphia Decandria, from its ten stamens having nine united and one free.

1.—THE SWEET MILK-VETCH, OR WILD LICORICE. (*ASTRAGALUS GLYCYPHYLLOS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 203; 2nd ed., t. 1022.

SPECIFIC CHARACTER.—Stem prostrate. Legumes obscurely trian-

gular, incurved. Leaves longer than the flower-stalks; leaflets oval. (*Smith.*)

DESCRIPTION, &c.—This species, though frequently found in England in woods or thickets on chalky or gravelly soils, is very rare in Scotland. The plant is not at all ornamental. Its stems, which are two or three feet long, lie trailing on the ground; its leaves are pinnate, and its flowers are of a dingy yellow. The root is remarkably large and thick, and if chewed when fresh, it has very much the taste of licorice; but when dried, it becomes excessively hard. It is a perennial, and it flowers in July.

2.—THE PURPLE MOUNTAIN MILK-VETCH. (*ASTRAGALUS HYPOGLOTTIS*, *Lin.*)SYNONYMS.—*A. arenarius*, *Huds.*; *A. danicus*, *Retz.*; *A. epiglottis*, *Dicks.*ENGRAVINGS.—Eng. Bot., t. 274; 2nd ed., t. 1023; and our *fig.* 2, in Pl. 27.SPECIFIC CHARACTER.—Stem prostrate. Flowers in round heads. Legumes ovate, deeply channelled along the back, compressed, hairy; hooked at the point. Leaflets blunt. (*Smith.*)

DESCRIPTION, &c.—This plant is found generally in open situations on rising ground, or on chalky rocks near the sea-coast. It only grows in chalky or sandy soils. The flowers are produced in heads, and are generally purple, or purple and white; but occasionally they are quite white. The plant is a perennial, and it flowers in July.

THE ALPINE MILK-VETCH. (A. ALPINUS, *Lin.*)

This is a very elegant plant, with slender stems, and drooping racemes of pale lilac flowers, tipped with very dark purple. This species can scarcely be called a native of Great Britain, as it has only been found in one situation in Scotland.

GENUS VII.

THE OXYTROPIS. (OXYTROPIS, *Dec.*)

Lin. Syst. DIADELPHIA DECANDRIA.

GENERIC CHARACTER.—Calyx 5-toothed. Keel ending in an ex- | with pinnated leaves. Peduncles axillary or radical. Flowers in
serted point. Stamens diadelphous. Pod two-celled, or half two- | spikes. (*Dec.*)
celled, the upper suture being turned inwards. Herbaceous plants,

DESCRIPTION, &c.—This genus is divided from Astragalus by Professor De Candolle, on account of the keel of the corolla ending in a narrow point, instead of being obtuse; and the cells of the legume being formed by the inflexed margin of the upper suture, instead of the lower. The name of Oxytropis is derived from two Greek words, signifying a sharp keel. It is placed in the same Linnaean class and order as the preceding genus.

1.—THE HAIRY MOUNTAIN OXYTROPIS. (OXYTROPIS URALENSIS, *Dec.*)

SYNONYMES.—*Astragalus uralensis*, *Lin.*; *Phaea uralensis*, *Wahl.* | leaves. Legumes oblong, tumid, pointed, shaggy, erect. Leaflets
ENGRAVINGS.—Eng. Bot., t. 466; 2nd ed., t. 1024. | ovate, acute, all over silky like the calyx. (*Smith.*)

SPECIFIC CHARACTER.—Stem none. Stalk upright, taller than the

DESCRIPTION, &c.—This plant has only a very small head of purple flowers, which appear in June and July. It has no proper stem, but the flower-stalk rises from a tuft of pinnate leaves, which are covered with a long silky pubescence. The plant is a perennial, and it is very abundant in dry mountainous pastures in Scotland, though it has never been found in England.

2.—THE YELLOW OXYTROPIS. (OXYTROPIS CAMPESTRIS, *Dec.*)

SYNONYMES.—*Astragalus campestris*, *Lin.*; *A. sordidus*, *Willd.*; | SPECIFIC CHARACTER.—Stem none. Stalk ascending. Legumes
Phaea campestris, *Wahl.* | ovate, inflated, hairy, erect. Leaflets lanceolate, acute, somewhat
ENGRAVINGS.—Eng. Bot., t. 2522; 2nd ed., t. 1025; and our fig. | hairy. (*Smith.*)
3, in Pl. 27.

DESCRIPTION, &c.—This species can hardly claim to be considered a real native of Great Britain, as it has only been found in Angusshire, in Scotland. It bears considerable resemblance to the preceding species, excepting in the colour of the flowers, which are yellow, with a slight tinge of purple on the keel.

GENUS VIII.

THE MELILOT. (MELILOTUS, *Tourn.*)

Lin. Syst. DIADELPHIA DECANDRIA.

GENERIC CHARACTER.—Calyx tubular, 5-toothed. Keel simple; | plants. Stipules adnate to the petiole. Leaves 3-leaved; leaflets
wings shorter than the vexillum. Pod longer than the calyx, coria- | often toothed. Flowers in loose racemes, either yellow or white.
ceous, one or few seeded, indehiscent, of various form. Herbaceous | (*Dec.*)

DESCRIPTION, &c.—This genus was formerly included in *Trifolium*, of which Linnaeus made it a section. There are numerous species of it found wild in different parts of Europe, particularly in Switzerland; but only



1 Common Yellow Melilot. 2 Harry headed Trefoil. 3 Common Bird's foot Trefoil.
4 Greater Bird's foot Trefoil. 5 Luceine. 6 The Heart Medick, or Clover.



one is a native of Great Britain. The name of *Melilotus*, signifies the Honey Lotus. It is placed in the same Linnaean class and order as the preceding genus.

1.—THE COMMON YELLOW MELILOT. (*MELILOTUS OFFICINALIS*, *Willd.*)

SYNONYMS.—*Trifolium Melilotus officinalis*, *Lin.*; *T. officinale*, *Smith.*

ENGRAVINGS.—Eng. Bot., t. 1340; 2nd ed., t. 1026; and our *fig.* 1, in Pl. 28.

SPECIFIC CHARACTER.—Clusters unilateral. Legume prominent, acute, transversely wrinkled, hairy, with two seeds. Stem erect. Stipulas awl-shaped. (*Smith.*)

DESCRIPTION, &c.—This is an annual plant, which is extremely common in fields, particularly when there is clay in the soil. It is much valued as fodder abroad, particularly in Switzerland, where it is said to give the Gruyère cheese its peculiar flavour. In this country, however, cattle do not appear to like it, as in grass fields it is generally left by them, though the grass is eaten all round it. It flowers in June and July, and the flowers have a very strong, and rather agreeable scent.

THE WHITE MELILOT. (*M. LEUCANTHA*, *Koch.*)

This plant is sometimes considered a variety of the preceding species, which it very closely resembles, except in the colour of the flowers, which is nearly white; and in their being somewhat smaller. This plant has been long known on the continent of Europe, and in North America; but it has only lately been discovered in England.

GENUS IX.

THE TREFOIL. (*TRIFOLIUM*, *Lin.*)

Lin. Syst. DIADELPHIA DECANDRIA.

GENERIC CHARACTER.—Calyx tubular, persistent, five-eleft, not glandular; with subulate segments. Keel shorter than both wings and vexillum. Stamens diadelphous. Pod small, indehiscent, often ovate with one or two seeds, shorter than the calyx by which it is covered,

seldom oblong, with three or four seeds, and a little longer than the calyx. Herbaceous plants. Stipules adhering to the petiole. Leaves three or five-leaved. Flowers in heads or dense spikes, bracteate, purple, white, or pale yellow. Petals in some cohering. (*Dec.*)

DESCRIPTION, &c.—The name of this genus is well known from the common kinds of Clover which are so frequently met with in our fields. There are, however, many British species which bear very little resemblance to the Clover in their flowers, though they may all be easily recognised by their leaves. The name of *Trifolium* signifies three leaves; and Trefoil has the same signification. It is placed in the same Linnaean class and order as the preceding genus. The Trefoil, according to some, is the badge of the Highland Clan Sinclair.

1.—THE DUTCH CLOVER. (*TRIFOLIUM REPENS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1769; 2nd ed., t. 1028.

SPECIFIC CHARACTER.—Heads globose. Flowers somewhat stalked. Legume within the calyx, four-seeded. Stems creeping, solid. (*Smith.*)

DESCRIPTION, &c.—The Dutch Clover is common in meadows and pasture lands in every part of Great Britain, particularly where the soil is rich and rather moist. It is a perennial, with a creeping stem, which lies upon the ground and roots into it at intervals. The flowers, which are white, are produced in globular heads,

and are erect when first expanded ; but they become pendulous before they decay. The plant continues in flower from May till September. The leaflets are inversely heart-shaped, and each is marked with a kind of crescent, or semicircular band, which is of a much lighter colour than the rest of the leaf. Cattle are particularly fond of this plant, and it is frequently sown when it is wished to lay down land in pasture. This plant is sometimes called white Trefoil ; and it is generally supposed to be the type of the Shamrock, the national badge of Ireland.

2.—THE PURPLE CLOVER, OR HONEYSUCKLE TREFOIL. (*TRIFOLIUM PRATENSE*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1770 ; 2nd ed., t. 1031.

SPECIFIC CHARACTER.—Spikes dense. Stems ascending. Petals

unequal. Calyx hairy ; four of its teeth equal. Stipulas ovate,

bristle-pointed. (*Smith.*)

DESCRIPTION, &c.—This is the common purple Clover, and it is particularly abundant in calcareous soils. The heads of flowers bear considerable resemblance, except in colour, to the Dutch Clover ; but the leaflets are much more pointed, and they are hairy. The light-coloured band on these leaflets is also much whiter than that on the leaflets of the Dutch Clover, and it forms a vandyke, instead of a semicircle. This species is also a perennial, and it flowers from May till September ; but there is another kind of purple Clover, (*T. medium*), which is only occasionally found wild in England, which does not flower till July. This last species has a very large head of dark purple flowers, and is decidedly ornamental. Its leaflets are much longer and thinner than those of the common purple Clover, and they have no white mark.

3.—THE STARRY-HEADED TREFOIL. (*TRIFOLIUM STELLATUM*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1545 ; 2nd ed., t. 1034 ; and our fig. 2, in Pl. 28.

SPECIFIC CHARACTER.—Spikes hairy, roundish. Stipulas elliptical.

Calyx-teeth longer than the corolla ; after flowering dilated, leafy, reticulated and spreading ; tube closed. Leaflets inversely heart-shaped. (*Smith.*)

DESCRIPTION, &c.—This very curious species is only found on the sea-coast between Shoreham and Brighton, particularly near the former place, where it grows in great abundance. It is an annual, and flowers in July and August.

THE CREAM-COLOURED CLOVER. (*T. OCHROLEUCUM*, *Lin.*)

This species very closely resembles the Dutch Clover ; but its flowers are of a pale yellow, and its leaflets, have no light-coloured band. It is a perennial, and flowers in June and July.

THE SEA TREFOIL. (*T. MARITIMUM*, *Huds.*)

This species has purple flowers, disposed in an oblong head. It only grows on the sea-coast. It is an annual, and it flowers in June and July.

THE HARE'S-FOOT TREFOIL. (*T. ARVENSE*, *Lin.*)

This species has its flowers in long cylindrical heads, which are ornamental from the dark purple bristles that fringe the division of the calyxes, though the flowers themselves are small and inconspicuous. The leaves are trifoliate, with pointed leaflets, which are not marked with any band.

THE STRAWBERRY-BEARING CLOVER. (*T. FRAGIFERUM, Lin.*)

This plant has purplish flowers, which are produced in globular heads ; but which have nothing remarkable in their appearance. When the flowers have fallen, however, the calyx of each spreads itself over the seed-vessel, and becomes inflated and coloured ; so that what was the head of flowers, assumes the appearance of a gigantic strawberry, and this gives rise to the specific name of the plant. This species only grows in moist situations where the soil is black and boggy.

THE REVERSED TREFOIL. (*T. RESUPINATUM, Lin.*)

This is an elegant little annual, only found in meadows near Bristol. It takes its name from the flowers being so curved that the broad petal, called the standard or vexillum, is the lowest part of the flower, instead of being the highest, as is usually the case.

THE HOP TREFOIL. (*T. PROCUMBENS, Lin.*)

This is a very beautiful little plant. The heads of flowers, when young, very much resemble the blossoms of the Hop ; but when older, the flowers change to a bright golden yellow, and finally become of a brownish orange before they decay. The species is an annual, and it is found in gravelly and sandy soils in every part of England and Scotland. The flowers appear in June and July.

There are several other species of *Trifolium* ; but they are inconspicuous weeds. One of them, which was formerly called the Bird's-foot Clover, is now placed in another genus, called *Trigonella*.

GENUS X.

THE BIRD'S-FOOT TREFOIL. (*LOTUS, Lin.*)*Lin. Syst. DIADELPHIA DECANDRIA.*

GENERIC CHARACTER.—Calyx tubular, 5-eleft; wings about as long as the vexillum ; keel beaked. Pod cylindrical or compressed, aperturous ; style straight, subulate.—Herbaceous plants. Leaves ternate.

Stipules leafy. Peduncles axillary, from 1 to 6-flowered, supported by a floral leaf. Flowers yellow, rarely white or pink. (*Lindley.*)

DESCRIPTION, &c.—The plants belonging to this genus, that are natives of Great Britain, have all bright yellow flowers ; and most of them are extremely common in fields. *Lotus* is a Greek word, the exact meaning of which is not known, but which is generally applied to plants having bean-like seeds that are used for food ; but the common English appellation of Bird's-foot Trefoil alludes to the shape and position of the pods, and the trifoliate leaves. It is placed in the same Linnæan class and order as the preceding genus.

1.—THE COMMON BIRD'S-FOOT TREFOIL. (*LOTUS CORNICULATUS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 2090 ; 2d ed., t. 1043 ; and our *fig. 3*, in Pl. 28.

recumbent, pitby. Legumes spreading, nearly cylindrical. Claw of the standard obovate. Filaments all dilated. (*Smith.*)

SPECIFIC CHARACTER.—Heads depressed, of few flowers. Stems

DESCRIPTION, &c.—This is, at once, one of the commonest and prettiest of our native plants. Indeed, there are few fields, where the soil is dry, in which it is not to be found ; and it is generally growing among grass. It is a perennial, and its bright golden yellow flowers appear from July to September. In some of the Midland Counties this plant is called Shoes and Stockings.

2.—THE GREATER BIRD'S-FOOT TREFOIL. (LOTUS MAJOR, *Scopoli.*)

ENGRAVINGS.—Eng. Bot., t. 2091; 2nd ed., t. 1044; and our *fig. 4*, in Pl. 28.

SPECIFIC CHARACTER.—Heads depressed, mauv-flowered. Stems

erect, tubular. Legumes drooping, cylindrical. Claw of the standard linear. Shorter filaments not dilated. (*Smith.*)

DESCRIPTION, &c.—This plant differs from the common Bird's-foot Trefoil in its flowers being more numerous and larger. It is also never found but in moist ground; whereas the preceding species always requires the ground to be dry. The Greater Bird's-foot Trefoil sometimes grows to the height of two feet. It is a perennial, and it flowers in July and August.

THE NARROW-LEAVED BIRD'S-FOOT TREFOIL. (L. TENUIS, *Waldst. et Kit.*)

This is probably only a variety of *L. corniculatus*, as the only difference is that the leaves are narrower, and the whole plant more slender and elongated. This plant is a perennial, and it flowers in July; but there is another still more slender kind, called *L. angustissimus*, which is an annual, and flowers in May. This latter plant is rare, being only found occasionally on the sea-coast of the south of England.

GENUS XI.

THE MEDICK. (MEDICAGO, *Lin.*)

Lin. Syst. DIADELPHIA DECANDRIA.

GENERIC CHARACTER.—Calyx somewhat cylindrical, 5-cleft. Keel rather distant from the vexillum. Stamens diadelphous. Pod many-seeded, variable in form, always falcate or spirally twisted.—Herbaceous plants or shrubs. Stipule usually cut. Leaves stalked, trifoliate; leaflets toothed. Peduncles axillary, with one, two, or many flowers. Flowers yellow or purple. (*Lindley.*)

DESCRIPTION, &c.—The species belonging to this genus are all fodder plants, and the greater part of them are annuals. The name of *Medicago* is said to have been given to this genus by the Greeks, because it was first introduced into Greece by the Medes. It belongs to the same Linnæan class and order as the last genus.

1.—THE LUCERNE, OR PURPLE MEDICK. (MEDICAGO SATIVA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1749; 2nd ed., t. 1046; and our *fig. 5*, in Pl. 28.

SPECIFIC CHARACTER.—Clusters upright. Legumes spiral. Stem erect, smooth. (*Smith.*)

DESCRIPTION, &c.—This plant is considered one of the best, or, at least, one of the most profitable kinds of fodder for animals, particularly for milch cows; and it is said to have been used for that purpose ever since the time of the ancient Greeks. The Lucerne is a perennial, and flowers in June and July. It grows best in a somewhat dry and calcareous soil. Its flowers are purple and rather pretty, and the seed-pods are curiously twisted. All the Medicagos have, indeed, curiously formed seed-pods; though, in some of the species, the seed-pods, instead of being spirally twisted like those of the Lucerne, are coiled up into the form of snails or caterpillars.

2.—THE HEART MEDICK, OR CLAVER. (MEDICAGO MACULATA, *Sibthorp.*)

SYNONYMES.—*M. polymorpha*, *Lin.*; *M. arabica*, *Withering*; *M. hispida*, *Gærtn.*; the spotted Medick.

ENGRAVINGS.—Eng. Bot., t. 1616; 2nd ed., t. 1049; and our *fig. 6*, in Pl. 28.

SPECIFIC CHARACTER.—Stalks 2 or 3-flowered. Leaflets inversely heart-shaped, spotted. Stipulas dilated, sharply toothed. Legumes spiral, depressed, fringed with long spreading bristles. (*Smith.*)

DESCRIPTION, &c.—This curious plant is sometimes grown in gardens, on account of its curiously spotted leaves and coiled-up seed-pods; from the latter peculiarity the plant is called Snails in the old catalogues of

flower seeds. It is an annual, and its small yellow flowers are produced in May and June. It is only found wild in gravelly soils in the southern parts of England.

THE YELLOW SICKLE MEDICK. (M. *FALCATA*, *Lin.*)

This species is very nearly allied to the Lucerne; but the flowers are of a pale yellow, and the seed-pods are not twisted, but only gently curved in the shape of a sickle. It is a perennial, and it flowers in June and July.

THE BLACK MEDICK, OR NONESUCH. (M. *LUPULINA*, *Lin.*)

This is an annual plant, with the flowers in heads, something like those of the Hop Trefoil, and very small coiled-up seed-pods, which, when ripe, are quite black. It flowers from May till September. It is frequently sown in pasture lands, and sheep are said to be remarkably fond of it.

THE FLAT TOOTHED MEDICK. (M. *MURICATA*, *Willd.*)

This plant is nearly allied to *M. maculata*. It is only found on the sea-coast of Suffolk, and is rather a doubtful native.

THE LITTLE BUR MEDICK. (M. *MINIMA*, *Willd.*)

This species is found in sandy places in the eastern counties of England, and bears considerable resemblance to the last species. The flowers are yellow and very small; but the legumes are large and coiled up, every coil being fringed with bristles, so as to make the legumes bear a considerable resemblance to the Bur, and hence the English name of the plant. The plant is an annual, and its flowers are produced in June and July.

THE RETICULATED MEDICK. (M. *DENTICULATA*, *Willd.*)

This species is very nearly allied to *M. maculata*, of which many botanists make it only a variety. It is an annual, and its very small flowers are produced in July and August.

II.—THE VETCH TRIBE.

The corolla in this tribe is always papilionaceous, and the stamens always in two parcels, nine having generally their filaments united, and one being distinct. The pod is always one-celled, and not jointed like the pod of the Pea. The cotyledons are thick and fleshy, like those of the Lupine; but, in germination, they always remain below ground, and never turn green. All the genera contained in this tribe are in the Linnæan class and order Diadelphia Decandria.

GENUS XII.

THE TARE. (ERVUM *Lin.*)

Lin. Syst. DIADELPHIA DECANDRIA.

GENERIC CHARACTER.—Calyx 5-cleft, with linear acute segments as long as the corolla. Style smooth. Pod oblong, 2 or 4-seeded. (Dec.)

DESCRIPTION, &c.—This is a small genus of annual, climbing plants, which are common in every part of the world; and which are generally very troublesome to the farmer, from the great abundance of their seeds, and the ease with which they vegetate. Two species, *E. Lens* and *E. Ervilia*, which are common in Asia and in the south of Europe, produce the seeds called Lentils, which constitute so large a portion of the food of the children in the French boarding-schools; and which are also supposed to have formed the “red pottage” for which Esau

sold his birthright. There are only two species natives of Britain, viz. *E. tetraspermum* and *E. hirsutum*, both of which are annual weeds, producing their pale-blue or purple flowers in June and July. *E. hirsutum*, in particular, is a very troublesome weed, as it is very apt to strangle the corn among which it grows, by its long, wiry tendrils. The legume of this species has only two seeds; while that of *E. tetraspermum* has four. The name of *Errum* is derived from the Celtic word for a ploughed field, as the plant generally grows wild in corn-fields.

GENUS XIII.

THE PEA. (PISUM, *Lin.*)

Lin. Syst. DIADELPHIA DECANDRIA.

GENERIC CHARACTER.—Calyx with foliaceous segments, the two upper shortest. Vexillum large, reflexed. Style compressed, keeled, villous on the upper side. Pod oblong, compressed, not winged, many-

seeded. Seeds roundish, with a roundish hilum. Annuals. Leaves abruptly pinnate, of three pair, with a tendril in place of a terminal leaflet. Stipules large. (Dec.)

DESCRIPTION, &c.—This genus contains only one British species; the eatable or common garden Pea, (*P. sativum*,) and the field or grey Pea, (*P. arvense*,) being both natives of the south of Europe. The name of *Pisum* is said to be the Celtic word for Pea.

1.—THE SEA-SIDE PEA. (PISUM MARITIMUM, *Lin.*)

SYNONYME.—*Lathyrus pisiformis*, *Hook.*

ENGRAVINGS.—Eng. Bot., t. 1046; 2nd ed., t. 1007; and our fig. 1, in Pl. 29.

SPECIFIC CHARACTER.—Foot-stalks flattish on the upper side. Stem angular. Stipulas arrow-shaped. Stalks many-flowered. (Smith.)

DESCRIPTION, &c.—This is a very showy-looking perennial, which is only found on the sea-coast in the eastern and southern districts of England. A curious legend is related of its first discovery. It is said that in the year 1555 there was a famine in Suffolk, and great quantities of persons were perishing for want of food, when the rocks between Aldborough and Orford became covered over with an immense quantity of the plants of this Pea, which grew rapidly and ripened such abundance of seed, that the lives were preserved of a great number of persons, who must otherwise have perished. The seeds, however, are very bitter and unpalatable. It flowers in July and August.

GENUS XIV.

THE VETCH. (VICIA, *Lin.*)

Lin. Syst. DIADELPHIA DECANDRIA.

GENERIC CHARACTER.—Calyx tubular, 5-cleft or 5-toothed, the two upper teeth shorter than the others. Stamens diadelphous. Style filiform, at nearly right angles with the ovary, villous on the upper side, and below the apex on the under. Pod oblong, 1-celled, many-

seeded. Seeds with an oval or linear lateral hilum.—Climbing herbaceous plants. Leaves abruptly pinnate, with a tendril in place of an odd leaflet. Stipulae generally sagittate. Peduncles axillary, either long and many-flowered, or short and 1-flowered. (Dec.)

DESCRIPTION, &c.—The common Vetch is a well-known British plant which is cultivated as a food for cattle; and some of the other British species are useful for herbage where they grow naturally on the banks of hedges, and other situations where they can find some support. They are all ornamental weeds, generally annuals, and most of them are found in very great abundance in every part of Great Britain. The name of *Vicia* is derived from the Celtic word of the plant.



1. See side Pea. 2. Wood Witch. 3. Broad leaved Everlasting Pea.
4. Yellow Everlasting Pea or Meadow Vetchling. 5. Hairy Vetchling. 6. Common Sunflower.



§ 1.—*Stalks elongated, many-flowered.*1.—THE WOOD VETCH. (*VICIA SYLVATICA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 79; 2nd ed., t. 1008; and our fig. 2, | SPECIFIC CHARACTER.—Stalks many-flowered. Leaflets elliptical. in Pl. 29. | Stipulas crescent-shaped, deeply toothed. (*Smith.*)

DESCRIPTION, &c.—This is a very elegant plant, which is generally found in the mountainous districts of Great Britain, where it is tolerably common. The stem does not climb higher than five or six feet. The flowers are of a very pale blue, or white striped with blue, and they appear in July and August. The plant is a perennial.

2.—THE TUFTED VETCH. (*VICIA CRACCA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1168; 2nd ed., t. 1009. | Leaflets lanceolate, downy. Stipulas half-arrow-shaped, mostly entire. SPECIFIC CHARACTER.—Stalks many-flowered. Flowers imbricated. | (*Smith.*)

DESCRIPTION, &c.—This is one of the commonest species in Great Britain, as there is scarcely a hedge in the months of July and August that does not show abundance of its flowers, which vary from a pale blue to a dark reddish purple. The plant is a perennial, and it grows best on sandy soils.

§ 2.—*Flowers axillary, nearly sessile.*3.—THE COMMON VETCH. (*VICIA SATIVA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 334; 2nd ed., t. 1010. | Leaflets elliptic-oblong; lower ones abrupt. Stipulas with a blackish SPECIFIC CHARACTER.—Flowers nearly sessile, mostly in pairs. | depression beneath. Seeds orbicular, smooth. (*Smith.*)

DESCRIPTION, &c.—There are two varieties of this species, one of which, *V. angustifolia*, has narrower leaves and paler flowers than the species; and the other, *V. Bobartii*, has very small dark crimson flowers. Both the species and its varieties are annuals, and the flowers are produced in June. Perhaps no plant produces more luxuriant food for cattle than the stem and leaves of the common Vetch. The seeds are used as food for pigeons.

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THE SPRING VETCH. (*V. LATHYROIDES, Lin.*)

A little insignificant plant, with very small purple flowers.

THE ROUGH-PODDED YELLOW VETCH. (*V. LUTEA, Lin.*)

This is rather a coarse-growing plant, with hairy leaves and rough pods. It is generally found on rocks, or growing among stones on the sea-shore. It is a perennial, and its pale yellow flowers, which are generally streaked with purple, are produced in June and July.

THE HAIRY-FLOWERED YELLOW VETCH. (*V. HYBRIDA, Lin.*)

This species is distinguished from the last by the hairs on the standard of the flower. It is only found in Somersetshire, and near Lincoln. It is a perennial, and it produces its yellow flowers in June and July.

THE SMOOTH-PODDED VETCH. (*V. LAVIGATA, Smith.*)

This species has only been found on the sea-coast near Weymouth. The flowers are generally pale blue, or white; though they are sometimes yellow. The plant, however, is always easily distinguished by the smoothness of its pods. The seeds are always extremely bitter. The plant is a perennial, and it flowers from July to September.

THE BUSH VETCH. (*V. SEPIUM, Lin.*)

This is a common species, growing in bushes and hedge-rows in every part of England. The flowers are blue, and they appear from May till July.

THE ROUGH-PODDED PURPLE VETCH. (*V. BITHYNICA*, *Lin.*)

This species bears considerable resemblance to *V. levigata*, but it is always distinguished by the roughness of its pod. Its flowers are purple, and they are produced in July and August. The plant is a perennial, and it is only found on the sea-coast in Dorsetshire and Hampshire, and near Doncaster in Yorkshire.

## GENUS XV.

THE VETCHLING. (*LATHYRUS*, *Lin.*)*Lin. Syst. DIADELPHIA DECANDRIA.*

GENERIC CHARACTER.—Calyx campanulate, 5-cleft, the two upper lobes the shortest. Stameus diadelphous. Style flat, dilated at the end, villous or pubescent in front. Pod oblong, many-seeded, 2-valved, 1-celled. Seeds round, or angular.—Climbing herbaceous plants.

Stipules half-sagittate. Leaves abruptly pinnate, of from one to three pairs, with a tendril in place of the terminal leaflet. Peduncles axillary. (*Dec.*)

DESCRIPTION, &c.—This genus is distinguished from *Vicia* by the style being flat and dilated at the end, instead of being thread-like, and with a tuft of hairs beneath the stigma; and by the calyx being bell-shaped, instead of tubular. The species are nearly all highly ornamental, and part are perennials, and part annuals. The name of *Lathyrus* was applied to a leguminous plant by Theophrastus.

1.—THE NARROW-LEAVED EVERLASTING PEA. (*LATHYRUS SYLVESTRIS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 805; 2nd ed., t. 1004.

SPECIFIC CHARACTER.—Quite smooth. Stems prostrate, winged. Leaflets linear-lanceolate, acuminate, coriaceous. Stipules half-sagitt-

tate, shorter than the leaf. Peduncles 3 to 6-flowered, the length of the leaf. Pods reticulated longitudinally. Seeds roundish, seaceous. (*Lindley.*)

DESCRIPTION, &c.—This is a very elegant climbing plant, the stems of which have large leafy wings; but the flowers are pale, and frequently have a greenish tinge. The species is a perennial, and grows abundantly in almost every part of England, producing its flowers in July and August.

2.—THE BROAD-LEAVED EVERLASTING PEA. (*LATHYRUS LATIFOLIUS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1108; 2nd ed., t. 1005; and our *fig. 3*, in Pl. 29.

SPECIFIC CHARACTER.—Quite smooth. Stems prostrate, winged. Leaflets elliptical, somewhat glaucous, obtuse and mucronate, with

three or five prominent veins. Stipules broad, half-sagittate. Peduncles many-flowered, longer than the leaves. Pods reticulated longitudinally. (*Lindley.*)

DESCRIPTION, &c.—This splendid plant is only rarely found wild in the north of England; but it is tolerably common in woods and thickets in the south. It is very nearly allied to the preceding species, from which it differs only in the shape of its leaflets, and in the brilliant dark crimson of its flowers, which are produced in July and August. The plant is a perennial, and when once introduced it spreads so rapidly, that it is extremely difficult to eradicate it.

THE MARSH EVERLASTING PEA. (*L. PALUSTRIS*, *Lin.*)

This species, which is also a perennial, grows abundantly in boggy ground in the eastern counties of England. The flowers are of a bluish purple, and they are produced from June till September.

3.—THE YELLOW EVERLASTING PEA, OR MEADOW VETCHLING. (*LATHYRUS PRATENSIS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 670; 2nd ed., t. 1003; and our *fig. 4*, in Pl. 29.

SPECIFIC CHARACTER.—Nearly smooth. Stems rather erect, four-cornered. Leaflets oblong or linear-lanceolate, with three prominent

veins. Stipules sagittate, ovate, shorter than the leaflets. Peduncles many-flowered, twice as long as the leaves. Calyx ribbed, with nearly equal teeth, the length of the tube. Pods obliquely reticulated. Seeds round, polished. (*Lindley.*)

DESCRIPTION, &c.—This beautiful plant is common in moist meadows and pastures in every part of England. When it can find any support, it grows three or four feet high; but generally it is a dwarf plant. Like the

broad-leaved Everlasting Pea, it creeps at the base, and, when once established, it spreads rapidly. It is a perennial, and it produces its bright golden-yellow flowers in July and August. Cattle are very fond of the herbage; but it has not yet been cultivated for fodder.

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4.—THE YELLOW VETCHLING. (*LATHYRUS APIACA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1167; 2nd ed., t. 1000.

SPECIFIC CHARACTER.—Stem erect. Petioles cylindrical, filiform, usually leafless, occasionally with two leaflets. Stipules very large, sagittate. Peduncles one-flowered, with a minute bracte at the apex. Segments of the calyx twice as long as the tube. Pods few-seeded, broad. Seeds compressed. (*Lindley.*)

DESCRIPTION, &c.—This is a very singular plant; the large dilated stipules and the long tendrils supplying the place of leaves. It is an annual plant, found on the borders of sandy or gravelly fields, generally in the eastern counties of England; and producing its bright yellow flowers in succession from June till August. The seeds, if eaten, occasion a violent headache.

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5.—THE CRIMSON, OR GRASS VETCHLING. (*LATHYRUS NISSOLIA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 112; 2nd ed., t. 1001.

SPECIFIC CHARACTER.—Stem erect. Petioles dilated, with from three to five prominent veins. Stipules minute, subulate. Flowers solitary, on long stalks. Peduncles without a bracte at the apex. Pods narrow, with projecting veins, reflexed. (*Lindley.*)

DESCRIPTION, &c.—This is a very singular-looking plant: when not in flower, it has the appearance of grass; and nothing can be more singular than the appearance of its bright crimson flowers when they expand, as they look at first sight as though they had been gathered from some kind of pea, and then thrown upon a tuft of grass. This plant is an annual, flowering in May and June, and it is by no means uncommon in shady, unfrequented lanes in different parts of England; growing best, however, in sandy soils that are somewhat moist.

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6.—THE HAIRY VETCHLING. (*LATHYRUS HIRSUTUS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1255; 2nd ed., t. 1002; and our fig. 5, in Pl. 29.

SPECIFIC CHARACTER.—Stems diffuse, winged. Leaflets linear, oblong. Stipules linear, half-sagittate, about as long as the petiole. Peduncles with from one to three flowers, scarcely longer than the leaves. Segments of the calyx ovate, the length of the tube. Pods oblong, hairy. Seeds round, scabrous. (*Lindley.*)

DESCRIPTION, &c.—This species is occasionally met with in the southern counties of England on the borders of cultivated fields, where it flowers about July. The seeds, though not absolutely poisonous, are decidedly unwholesome; but fortunately they have so disagreeable a flavour that children are not likely to eat them. The plant is an annual.

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GENUS XVI.

THE BITTER VETCH. (*OROBUS*, *Lin.*)

*Lin.* *Syst.* *DIADELPHIA DECANDRIA.*

GENERIC CHARACTER.—Calyx campanulate, 5-cleft, the two upper lobes the shortest. Stamens diadelphous. Style slender, linear, villous at the end. Pod cylindrical, oblong, 1-celled, 2-valved, many-seeded. Seeds with a linear hilum.—Erect herbaceous plants. Stipules half-sagittate. Leaves abruptly pinnate, with a short simple seta in place of the terminal leaflet. Racemes axillary, stalked. (*Dec.*)

DESCRIPTION, &c.—The plants belonging to this genus are distinguished from those to which they are most nearly allied, by having no tendrils; a short bristle supplying their place. The name of *Orobis* is derived from two Greek words, signifying to strengthen or invigorate an ox.

1.—THE TUBEROUS BITTER VETCH. (*OROBOS TUBEROSUS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1153; 2nd ed., t. 998.

SPECIFIC CHARACTER.—Quite smooth. Roots tuberous. Stems prostrate. Leaves of two or four pairs: leaflets elliptical, mucronate, dotted, with nearly parallel veins. Stipules half-sagittate. Peduncles

bearing few flowers, and scarcely longer than the leaves. Teeth of the calyx unequal, ovate, obtuse, shorter than the tube. Pods compressed, with obsoletely-reticulated veins. Seeds spherical. (*Lindley.*)

DESCRIPTION, &c.—This species is very common in the north of England, and in Scotland, where it grows in thickets, spreading rapidly by its underground stems, which at intervals thicken into tubers. These tubers have a sweet taste, resembling that of liquorice; and Sowerby informs us “that they are chewed by the Highlanders to assuage hunger and thirst, and in some parts of Scotland a fermented liquor is prepared from them, which is said to be an agreeable beverage. In Flanders they are often roasted and eaten in the manner of chestnuts.” The species is a perennial, and it flowers in May and June. There is a variety with very narrow leaves.

THE BLACK BITTER VETCH. (*O. NIGER, Lin.*)

This plant has only been found wild in Scotland; but it has been long cultivated in gardens. Mr. Loudon was particularly partial to this plant for its pretty, though simple flowers, and its light and elegant appearance. It is a perennial, and it flowers in June and July. The specific name alludes to the plant becoming black when dried.

THE WOOD BITTER VETCH. (*O. SYLVATICUS, Lin.*)

This species is very common in all the mountainous districts of Great Britain. It is a perennial, and its flowers, which are cream-coloured with purple streaks, appear in May and June.

## III.—THE SAINTFOIN TRIBE.

The flower is papilionaceous; and the stamens are either all joined together, or they are in two packets, one consisting of nine, and the other of one; or they are in two of five each. The seed-pod is divided into numerous joints, containing one seed in each. The cotyledons are thin, and in germination they rise above the ground, and become green. The genera contained in this tribe are in the same Linnæan class and order as the last tribe.

## GENUS XVII.

THE BIRD'S-FOOT. (*ORNITHOPUS, Lin.*)*Lin. Syst.* DIADELPHIA DECANDRIA.

GENERIC CHARACTER.—Calyx with bractæ, tubular, nearly equally 5-toothed. Keel very small and compressed. Stamens diadelphous. Pod compressed, consisting of numerous 1-seeded, indehiscent joints, truncate equally on each side, with parallel margins.—Hairy annuals.

Leaves pinnate. Stipules small, adhering to the petiole. Peduncles axillary, few-flowered. Flowers small, white or rose-colour. A leafy pinnated bractæ under each head. (*Dec.*)

DESCRIPTION, &c.—The only species of this genus which is a native of Britain is *O. perpusillus*, a little annual with very small flowers, which appear in May. The seed-pods appear in bunches, which, from their curiously jointed appearance, resemble a bird's-foot, and hence the English name of the plant. The scientific name has the same signification.

## GENUS XVIII.

THE HORSE-SHOE VETCH. (HIPPOCREPIS, *Lin.*)*Lin. Syst.* DIADELPHIA DECANDRIA.

GENERIC CHARACTER.—Calyx 5-cleft, with equal, acute lobes. Keel 2-lobed. Stamens diadelphous. Style filiform, acute. Pod of several joints, each containing one seed, and curved like a horse-shoe; whence the upper edge of the pod appears as if cut into several rounded

recesses. Seeds cylindrical or compressed, oblong, attached to the middle part of each curvature. Herbaceous plants or shrubs. Leaves pinnated. Flowers yellow, either axillary, solitary, and sessile, or in umbels at the end of an axillary peduncle. (Dec.)

DESCRIPTION, &c.—There is only one species of this genus which is a native of Britain, and it is called the Tufted Horse-shoe Vetch, (*H. comosa*, *Lin.*,) because its flowers are produced in heads or tufts. It is a perennial plant, and produces its bright yellow flowers from May till August. When in flower, it is very difficult to distinguish it from *Lotus corniculatus*; but when in seed it is easily known, from its pods being curved into a number of small indentures, which bear considerable resemblance to miniature horse-shoes. It is from this peculiarity that the plant takes both its English and its scientific name.

## GENUS XIX.

THE SAINTFOIN. (ONOBRYCHIS, *Tourn.*)*Lin. Syst.* DIADELPHIA DECANDRIA.

GENERIC CHARACTER.—Calyx 5-cleft, with subulate equal divisions. Keel truncate obliquely; wings short. Stamens diadelphous. Pod sessile, of one joint, compressed, indehiscent, coriaceous, prickly or

winged; the upper side thick and straight; the lower convex and thinner. Herbaceous plants. Leaves pinnated. Peduncles long, bearing spikes of flowers at the end. Flowers red or white. (Lindley.)

DESCRIPTION, &c.—It is very seldom that useful plants are so ornamental as this. The name of *Onobrychis* is derived from two Greek words, signifying asses' food; and Saintfoin is compounded of two French words, signifying holy hay, and both allude to the highly nutritious properties of the plant when used as fodder.

1.—THE COMMON SAINTFOIN. (ONOBRYCHIS SATIVA, *Lam.*)

SYNONYME.—*Hedysarum Onobrychis*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 96; 2nd ed., t. 1021; and our fig. 6, in Pl. 29.

SPECIFIC CHARACTER.—Leaves pinnate, nearly smooth. Legumes single-seeded, toothed at the margin and ribs. Wings of the corolla not longer than the calyx. Stem elongated. (Smith.)

DESCRIPTION, &c.—This very beautiful plant grows wild on chalky hills and dry open downs in various parts of England, and it is cultivated in many places as a very nutritious food for cattle. It is, indeed, very useful to the farmer, as it affords abundance of succulent food for cattle in dry seasons when there is little grass. It is a perennial, and it flowers in June and July.

## CHAPTER XXXII.

THE ROSE FAMILY. (ROSACEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Calyx 4 or 5-lobed, with a disk either lining the tube or surrounding the orifice; the fifth lobe uppermost. Petals five, perigynous, equal. Stamens either definite or indefinite, inserted on the calyx, just within the petals, in aestivation curved inwards; anthers in nate, 2-celled, bursting longitudinally. Ovaries superior, either solitary or several, 1-celled; ovula two or more, suspended, very rarely erect; styles lateral; stigmata usually

simple, and emarginate on one side. Fruit either 1-seeded nuts or small drupes; or follicles containing several seeds. Seeds suspended, rarely ascending. Embryo straight, with a taper short radicle pointing to the hilum, and flat cotyledons. Albumen in small quantity, fleshy, usually almost obliterated when the seeds are ripe. Herbaceous plants or trees. Leaves simple or compound, alternate, with two stipulae at their base. (Lindley.)

DESCRIPTION, &c.—The order Rosaceæ was formerly considered to include the Apple, Pear, and other plants comprised in the genus *Pyrus*; and also the Thorns, the Medlar, and the Cotoneasters; but these plants

have, I think very properly, been removed by Dr. Lindley to another order, which he calls Pomaceæ. The Rose Family, as at present restricted, contains fourteen genera; nearly all of which, excepting the first, have flowers which in their form and general appearance bear considerable resemblance to single Roses. Among the genera still included in this order are the Plums, Cherries, and other stone fruits, and the Raspberry and the Strawberry.

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### I.—THE SPIRÆA TRIBE.

The seeds are in several follicles, which are surrounded by the calyx; from one to six seeds being in each follicle, and hanging suspended from its inner edge. There is only one genus in this tribe, some of the species of which are shrubs, and some herbaceous plants.

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#### GENUS I.

##### THE SPIRÆA. (SPIRÆA, *Lin.*)

*Lin. Syst.* ICOSANDRIA DI-PENTAGYNIA.

GENERIC CHARACTER.—Calyx 5-cleft, persistent. Stamens from 10 to 50, inserted along with the petals upon a disk adhering to the calyx. Follicles one or several, distinct, or occasionally cohering by the base. Seeds from two to six. (*Lindley.*)

DESCRIPTION, &c.—This genus is extremely unlike all the others included in the same order; as its flowers are produced in spiral or round clusters, and its seeds are in follicles. It is, however, connected with the others, by the parts of the flower being all inserted in the disk which lines the tube of the calyx; and, indeed, this peculiarity, when combined with the numerous stamens, forms the distinguishing characteristic of the order. The name of *Spiraea* is supposed to be derived from the Greek word signifying a cord, in allusion to the flexibility of the branches of the plants; but this does not appear a very plausible derivation, as the branches are not particularly flexible. The genus is placed in the Linnaean class Icosandria, because there are generally twenty stamens attached to the calyx; and in the order Di-Pentagynia, because there are sometimes two, and sometimes five styles.

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##### 1.—THE BRIDEWORT, OR WILLOW-LEAVED SPIRÆA. (SPIRÆA SALICIFOLIA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1468; 2nd ed., t. 702; and our *fig. 1*, in Pl. 30. | SPECIFIC CHARACTER.—Leaves elliptic-lanceolate, unequally serrated, smooth. Clusters terminal, compound. (*Smith.*)

DESCRIPTION, &c.—This very pretty shrub is only found wild in the north of England, and in Scotland. It is, however, common in gardens, where it is very ornamental from its delicate pale pink flowers, which grow in a close erect raceme, in which the stamens are most conspicuous. In my native county, Warwickshire, this plant is always called Queen's Needlewort, and it is one of the very few flowers I knew before I was married. It grows best in thickets, where the ground is somewhat moist, and it sends out numerous suckers from the root. Its flowers appear in July and August.

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##### 2.—THE COMMON DROPWORT. (SPIRÆA FILIPENDULA, *Lin.*)

ENGRAVINGS.—Eng. Bot. t. 284; 2nd ed., t. 703; and our *fig. 2*, in Pl. 30. | SPECIFIC CHARACTER.—Leaves interruptedly pinnate; leaflets uniform, serrated, smooth. Stem herbaceous. Flowers cymose, with many styles. (*Smith.*)

DESCRIPTION, &c.—This species is generally found in situations as different as possible from the last: the Willow-leaved Spiræa only growing in the north of England and in Scotland, and being always found in moist,



1 Willow-leaved Spirea. 2 Common Dog-rose. 3 Meadow-sweet or Queen of the Meadow.



shady places ; while the Dropwort is only found in open, dry pastures, and very rarely except in the midland and southern counties of England. The species takes its name of Dropwort, and also its specific name of *Filipendula*, from the curious construction of its root, the fibres of which form drop-like tubers, attached to each other by slender threads. The flowers, which are cream-colour, are produced in loose panicles, and they frequently become double by cultivation. They appear about July. The plant is a perennial.

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3.—THE MEADOW-SWEET, OR QUEEN OF THE MEADOWS. (*SPIREA ULMARIA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 960 ; 2nd ed., t. 704 ; and our *fig. 3*, | beneath ; the terminal leaflet largest and lobed. Stem herbaceous. In Pl. 30. Flowers cymose, with many styles. (*Smith.*)

SPECIFIC CHARACTER.—Leaves interruptedly pinnate ; downy

DESCRIPTION, &c.—This is a very common perennial plant which is found in moist meadows, and on the borders of ditches in every part of Great Britain. The fragrance of the flowers, which resembles that of the May, is perceptible at a considerable distance when the weather is calm. The flowers appear in June and July.

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II.—THE STONED-FRUIT TRIBE.

The seeds are contained in solitary drupes, each drupe being what is commonly called a stoned-fruit, one, or at most two, kernels or seeds being contained in a bony seed-vessel or nut, popularly called the stone. The calyx falls off with the flower. This tribe contains all the stoned fruits, including the Peach, the Nectarine, the Almond, and the Apricot ; but the only British genera are the Plum and the Cherry. All the species belonging to this tribe are trees or shrubs, having simple leaves and glandular petioles. They all abound in prussic acid ; and, when their bark is wounded, produce gum.

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GENUS II.

THE PLUM. (*PRUNUS, Tourn.*)

*Lin. Syst.* ICOSANDRIA MONOGYNIA.

GENERIC CHARACTER.—Vernation convolute. Drupe covered with bloom, with a smooth stone deeply furrowed at its inner edge. (*Lindley.*)

DESCRIPTION, &c.—Few people, who are not botanists, can imagine the very slight botanical difference that there is between the Plum and the Cherry. Linnæus, indeed, included them in the same genus ; and modern botanists, though they have separated them, can find no more decided marks of distinction than the manner in which the leaf is folded in the bud, the bloom on the fruit of the Plum, and the furrows in its stone. The fruit of the Plum-tree has also generally a shorter stalk than that of the Cherry-tree ; and Cherries are often produced in bunches, while Plums are generally solitary, or, at most, only two or three together. The word *Prunus* is simply the Greek name for the Plum. The genus is placed in the Linnæan class Icosandria, because it has generally twenty stamens attached to the calyx ; and in the order Monogynia, because it has only one style.

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1.—THE WILD PLUM. (*PRUNUS DOMESTICA, Lin.*)

ENGRAVING.—Eng. Bot., t. 1783 ; 2nd ed., t. 690.

SPECIFIC CHARACTER.—Flower-stalks solitary or in pairs. Leaves lanceolate-ovate. Branches without thorns. (*Lindley.*)

DESCRIPTION, &c.—This species, which is supposed to be the origin of all the Plums grown in our gardens, is rather a doubtful native. It flowers in May, and the fruit, which is ripe about August and September, is long

rather than round. It has somewhat the flavour of a Damson, and it is almost always black; though some persons suppose it to be only a variety of the Bullace, which is generally yellow.

### 2.—THE SLOE, OR BLACKTHORN. (PRUNUS SPINOSA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 842; 2nd ed., t. 692; and our *fig.*

SPECIFIC CHARACTER.—Flower-stalks solitary. Leaves lanceolate, smooth. Branches thorny at the end. (*Lindley.*)

DESCRIPTION, &c.—The Blackthorn is one of the commonest of English shrubs, and it grows wild in the hedges and thickets in every part of Great Britain. It is very ornamental, and its blossoms are generally the first that are seen in the hedges, as they appear long before the leaves. The shrub, when not in leaf, is not at all ornamental, as its branches are very crooked and spinous. The fruit is small, and very austere; and its juice is said to be used to adulterate the inferior kinds of port-wine. The leaves are frequently mixed with the coarser kinds of black tea, to which they give a peculiarly rank and disagreeable flavour; they are exceedingly astringent, and when taken in large quantities are said to be poisonous.

Howitt says, in allusion to the early blossoming of the Sloe:—

“ The April air is sharp and keen,  
No leaf has dared unfold,  
Yet thy white blossoms’ radiance sheen,  
Spring’s banner, I behold.  
Though all beside be dead and drear,  
Undauntedly thy flowers appear.

“ Thou com’st the herald of a host  
Of blooms, which will not fail,  
When summer from the southern coast  
Shall call the nightingale.  
Yet early, fair, rejoicing tree,  
Sad are the thoughts inspir’d by thee.

“ All other trees are wont to wear  
First leaves—then flowers—and last  
Their burden of rich fruit to bear  
When summer’s pride is past.  
But thou, so prompt thy flowers to show,  
Bear’st but the harsh, unwelcome sloe.”

Cowper also alludes to the harshness of the fruit, in his well-known lines:—

“ \* \* \* Or sloes austere,  
Hard fare!—but such as boyish appetite  
Disdains not.”

If, however, the sloes are suffered to hang on the bush till they are mellowed by the frost, they are said to become sweet. The bush grows very slowly, and its wood is very hard and tough.

### 3.—THE BULLACE. (PRUNUS INSITITIA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 841; 2nd ed., t. 691.

SPECIFIC CHARACTER.—Flower-stalks in pairs. Leaves lanceolate-ovate; downy beneath. Branches thorny at the end. (*Lindley.*)

DESCRIPTION, &c.—The Bullace grows in similar situations to the Sloe, but is much less common. It is a tree rather than a shrub, and by no means so crooked or so thorny as the Sloe. Its blossoms appear in April, generally about a fortnight or three weeks after those of the Sloe. Its fruit is much less austere, and, in fact, becomes sweet and somewhat mealy when ripe. It is of a waxen texture, and generally yellow; though it is said to be found occasionally black. The shape of the fruit is quite round; and it sometimes grows to a considerable size.



1 Sloe or Blackthorn 2 Wild Cherry 3 Bird Cherry.



## GENUS III.

THE CHERRY. (CERASUS, *Tourn.*)*Lin. Syst.* ICOSANDRIA MONOGYNIA.

GENERIC CHARACTER.—Vernation conduplicate. Drupe not covered with bloom, with a smooth stone not furrowed at its inner edge. (*Lindl.*)

DESCRIPTION, &c.—I have already, when speaking of the Plum, mentioned what a slight difference there is between the Cherry and the Plum. The word *Cerasus* is derived from the ancient name of a town in Asia, whence the cultivated Cherry was first brought to Rome by Lucullus, a Roman general, sixty-eight years before Christ. The genus is in the same Linnæan class and order as the preceding one; as, in fact, both were included in one by Linnæus.

1.—THE WILD CHERRY. (CERASUS AVIUM, *Manch.*)

SYNONYME.—*Prunus Cerasus, Lin.*

ENGRAVINGS.—Eng. Bot., t. 706; 2nd ed., t. 689; and our fig. 2, in Pl. 31.

SPECIFIC CHARACTER.—Flowers in nearly sessile umbels. Leaves ovate-lanceolate, or obovate with a point, with two glands at the base (*Lindley.*)

DESCRIPTION, &c.—There are two quite distinct trees known under the name of the Wild Cherry-tree in Great Britain. One of these (*C. sylvestris*, Ray) has black fruit, and is known by the name of the Merries or Merry-tree in some parts of England, and the Gean or Corone in others. The flesh of this Cherry is always firm, and sometimes bitter, and the skin is generally thick and tough, and will not separate from the fleshy part of the fruit. The stone is very large, and adheres firmly to the flesh. The colour of the fruit is either black or yellow. The other kind of Wild Cherry (*C. vulgaris*, Mill.) is commonly called the Kentish, or Flemish Cherry. The flesh is very soft and juicy, and the skin may be readily separated from it; it also separates easily from the stone; and its taste, in a wild state, is sour. The colour of the fruit is red. This species is most common in the southern and eastern counties of England, particularly Kent; while the Gean is most abundant in the north.

Though I have not been able to find any poetry distinctly relating to the Cherry, nothing can be more common than allusions to it in poetical descriptions of beauty; and the beautiful lines Shakspeare has put into the mouth of *Helena* in her address to *Hermia*, will be familiar to every one:—

“ \* \* \* \* So we grew together,  
Like to a double cherry, seeming parted;  
But yet a union in partition,  
Two lovely berries moulded on one stem.”

The Feast of the Cherries at Hamburg, is not, however, so generally known. The origin of this feast is said to be as follows:—“ In 1432, when the city of Hamburg was besieged by the Hussites, one of the citizens named Wolf proposed that all the children in the city, between seven and fourteen years of age, should be clad in mourning, and sent as suppliants to the enemy. Procopius Nasus, Chief of the Hussites, was so much moved by this spectacle, that he not only promised to spare the city, but regaled the young suppliants with cherries and other fruits; and the children returned crowned with leaves, shouting ‘ Victory! ’ and holding boughs laden with cherries in their hands.”—*Arb. Brit.*

The Wild Cherry is one of the most ornamental of the British trees; and the bitter-fruited kind, or Gean, which frequently grows forty or fifty feet high, as its flowers are large and very abundant, has a beautiful effect

during the month of May in the woods. The wood is very fine-grained and ornamental as timber, and tables made of it are often found in farm-houses in the country.

## 2.—THE BIRD CHERRY. (CERASUS PADUS, *Dec.*)

SYNONYME.—*Prunus Padus, Lin.*

ENGRAVINGS.—Eng. Bot., t. 1383; 2nd ed., t. 688; and our *fig.* 3, in Pl. 31.

SPECIFIC CHARACTER.—Flowers in long racemes. Leaves ovate-lanceolate, acuminate, thin; smooth beneath, with spreading serratures. Fruit small, bitter.

DESCRIPTION, &c.—The English Bird Cherry, though less ornamental than the American, is still a beautiful little tree, and it is very common in woods and hedges in the north of England, where it flowers in the month of May. The fruit is very small, and of so dark a purple as to be almost black. It ripens in the month of July, and though it is excessively bitter, it is greedily eaten by the birds. Hence the popular name of Bird Cherry.

## III.—THE STRAWBERRY TRIBE.

The fruit of the plants included in this tribe consists of small nuts or stones, which are sometimes included in a juicy drupe, as in the Raspberry; and sometimes naked, as in the Strawberry; or invested in a dry permanent calyx, as in the Potentilla. The carpels are always seated on a dilated receptacle, which is sometimes succulent, as in the Strawberry, and sometimes dry. The calyx is either four or five-cleft, sometimes bearing small bracts or bracteoles on its tube, equal in number to the segments, and alternate with them. The flowers have five petals, and the seed is solitary. Most of the plants belonging to this tribe are herbaceous, except the Brambles, which are suffruticose.

## GENUS IV.

### THE BRAMBLE. (RUBUS, *Lin.*)

*Lin. Syst. ICOSANDRIA POLYGYNIA.*

GENERIC CHARACTER.—Calyx somewhat campanulate, five-lobed, without external bracteoles. Petals five. Stamens indefinite. Fruit consisting of numerous succulent drupelets, placed upon an elevated dry receptacle. Seed inverted. Shrubs or herbaceous plants. Stems usually long and procumbent, sterile the first year, bearing flowers and fruit the second, and then perishing. Leaves either simple, ternate, quinate, pedate, or pinnate, always more or less divided at the margin. (Lindley.)

DESCRIPTION, &c.—There is perhaps no genus of plants that has occasioned botanists more trouble than this. As, however, Dr. Lindley has bestowed considerable attention on the genus, I shall follow him in most cases, without troubling my readers with the details of the reasons which have led him to the conclusions he has arrived at. The word *Rubus* is supposed to be derived from the Latin word *ruber*, which signifies red, in allusion, I suppose, to the colour of the juice of the fruit. The genus is placed in the Linnæan class *Icosandria*, from its twenty stamens; and in the order *Polygynia*, from its numerous carpels.

#### § 1.—Shrubby.

##### 1.—THE RASPBERRY. (RUBUS IDÆUS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 2442; 2nd ed., t. 719.

SPECIFIC CHARACTER.—Stem erect. Leaves pinnate. (Lindley.)

DESCRIPTION, &c.—The Wild Raspberry is very common in the north of England and in Scotland, where it grows in great abundance in thickets. The stems are generally about four feet high, and very slender, bending

over in an arched manner. They are only biennial, withering as soon as the ripe fruit has dropped. The fruit is smaller than the cultivated variety, but it has a higher flavour. The flowers appear in June.

## 2.—THE DEWBERRY. (*RUBUS CÆSIUS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 826; 2nd ed., t. 722; and our *fig. 1*, in Pl. 32.

SPECIFIC CHARACTER.—Branches with scarcely any bristles. Stem-leaves all ternate. Racemes corymbose. Fruit always glaucous. (*Lindley.*)

DESCRIPTION, &c.—The Dewberry is a very common plant, particularly in the north of England and in Scotland. It is a weak, trailing plant, the stems of which are covered with a glaucous bloom. The flowers appear in June and July; and the fruit, which is ripe in September, has a glaucous bloom, like dew; and hence, I suppose, is derived the name of the plant. The drupeolæ, or grains of which it is composed, though few in number, are very large, and they have a subacid flavour. The leaflets are always three in number, and the prickles are usually straight, and very strong. *R. hirtus* and *R. dumetorum* are supposed to be only varieties of the Dewberry.

## 3.—THE COMMON BRAMBLE, OR BLACKBERRY. (*RUBUS FRUTICOSUS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 715; 2nd ed., t. 721; and our *fig. 2*, in Pl. 32.

SPECIFIC CHARACTER.—Leaflets shining, even, hard and white beneath. Panicles long, narrow, downy. (*Lindley.*)

DESCRIPTION, &c.—The Common Bramble is so well known, that it needs no description. It is found in hedges and thickets every where, flowering in July and August, and ripening its fruit in September. The stems are long, arching, and remarkably tough. The thorns are very strong, and being hooked, catch hold of everything that comes near them. The plant has creeping roots, and sends up numerous suckers. The fruit is equally good to eat fresh or cooked; and, in particular, it makes a delicious jam. When too ripe, however, it loses its flavour. The berries are called Bumblekites in the north.

The following lines on the Bramble are by Elliott, the author of the *Corn-Law Rhymes*:

“Thy fruit full well the school-boy knows,  
Wild Bramble of the brake,  
So put thou forth thy small white rose,  
I love it for his sake.

“Though Woodbines flaunt and Roses blow  
O'er all the fragrant bowers,  
Thou need'st not be ashamed to show  
Thy satin-threaded flowers.

“And thou, Wild Bramble, back doth bring,  
In all their beauteous power,  
The fresh green days of life's fair spring,  
And boyhood's blossomy hour.

“Again thou bid'st me be a boy,  
More gay than bird or bee,  
To gad in freedom and in joy,  
O'er bank and brae with thee. ’

The beautiful cut-leaved Bramble, *R. laciniatus*, is supposed to be only a variety of this species: as are also *R. Radula*, *R. rhamnifolius*, and *R. leucostachys*.

## THE RED-FRUITED BRAMBLE. (*R. SUBERECTUS, And.*)

This species has large, handsome, white flowers, and palmate leaves; but in other respects it closely resembles the Raspberry, particularly in the fruit, which is of a deep red, and resembles the Raspberry in flavour. The flowers appear from June till August. This species is most common in the north.

THE PLAITED-LEAVED BRAMBLE. (*R. AFFINIS*, *Lindl.*, *R. PLICATUS*, *Borrer*, *R. NITIDUS*, *Smith*.)

This plant is sometimes supposed to be a variety of the preceding species ; but the fruit, which is small, is, when ripe, black and glossy. The plant is also found chiefly in Sussex. *R. fissus*, *Lindl.*, sometimes called *R. fastigiatus*, is supposed to be another variety of *R. suberectus*.

THE HAZEL-LEAVED BRAMBLE. (*R. CORYLIFOLIUS*, *Smith*, *R. VULGARIS*, *W. and N.*)

This very handsome species has long trailing stems, which look glaucous, with a purplish tint, in the sun, and are green in the shade. These branches are brittle, and full of pith. Sometimes they grow erect for a short time, and then bend downwards and take root at the extremity ; thus forming a natural arch, through which it was formerly the custom to draw children affected by the hooping-cough, in the superstitious belief that it would cure them. The following Brambles are supposed to be either varieties of *R. corylifolius*, or very nearly allied species : The large-leaved Bramble (*R. macrophyllus*, Weihe and Nees) ; the Hornbeam-leaved Bramble (*R. carpinifolius*, Weihe and Nees) ; the brownish-black Bramble (*R. fusco ater*, Weihe and Nees) ; Köhler's Bramble (*R. Köhleri*, Weihe and Nees) ; the glandulous-bristled Bramble (*R. glandulosus*, Smith) ; the rough Bramble (*R. rufus*, Weihe and Nees) ; the diverse-leaved Bramble (*R. diversifolius*, *Lindl.*).

§ 2. *Herbaceous.*4.—THE ARCTIC, OR DWARF CRIMSON BRAMBLE. (*RUBUS ARCTICUS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1585 ; 2nd ed., t. 725 ; and our *fig. 3*, in Pl. 32.

SPECIFIC CHARACTER.—Leaflets three, bluntly serrated. Stem without prickles, bearing one or two solitary flowers. Petals roundish. (*Smith*.)

DESCRIPTION, &c.—This curious little plant is more like a wild Geranium than a Rubus. It is found in mountainous rocky moors, but is rare in Britain, though it is exceedingly common in Sweden and Lapland. The fruit is composed of a few large grains, and is of a pale purplish red. It is sweet, and has a very fine flavour. The flowers are of a deep rose-colour, and appear in June. The plant is a perennial.

5.—THE STONE BRAMBLE. (*RUBUS SAXATILIS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 2233 ; 2nd ed., t. 724.

SPECIFIC CHARACTER.—Stem nearly herbaceous, veiny, prostrate, unarmed, hairy. Leaves ternate, obovate, coarsely cut and serrated, pubescent. Flowers in contracted umbels. Petals oblong. (*W. & N.*)

DESCRIPTION, &c.—This plant is common in the mountainous districts of England, Wales, and Scotland. It spreads rapidly by means of its creeping runners ; but its flowering shoots are erect. It has only a few weak prickles, and small greenish flowers, which appear in June. The fruit is crimson, and never consists of more than three or four drupelets ; sometimes, indeed, it has only one. The plant is a perennial.

6.—THE CLOUDBERRY, OR MOUNTAIN BRAMBLE. (*RUBUS CHAMÆMORUS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 716 ; 2nd ed., t. 726 ; and our *fig. 4*, in Pl. 32.

SPECIFIC CHARACTER.—Leaves simple, plaited, lobed. Stem without prickles, simple, single-flowered. Segments of the calyx ovate. (*Smith*.)

DESCRIPTION, &c.—This is a perennial plant, very common on the moors of the mountainous districts of the north of England, Wales, Scotland, and Ireland. It spreads rapidly, and produces its large, solitary, white flowers in June. The leaves bear a striking resemblance to those of the Mallow. The male and female flowers are generally separate ; the same plant very seldom bearing stamens and pistils. The fruit is large, of a bright orange, and its flavour resembles that of tamarinds.



1 Dewberry. 2 Common Bramble or Blackberry.  
3 Arctic, or Dwarf Crimson Bramble. 4 Cloudberry.



## GENUS V.

THE STRAWBERRY. (FRAGARIA, *Lin.*)*Lin. Syst. ICOSANDRIA POLYGYNIA.*

GENERIC CHARACTER.—Calyx concave, 5-cleft, with 5 external bracteoleæ. Petals 5. Stamens indefinite. Fruit consisting of numerous small nuts, placed upon a succulent receptacle. Seed inverted. | Herbaceous plants, propagating themselves by runners. Leaves teruate or simple. (*Lindley.*)

DESCRIPTION, &c.—All the species of this genus are fragrant, and hence the name *Fragaria*. The genus is in the same Linnæan class and order as the Bramble.

1.—THE WOOD STRAWBERRY. (FRAGARIA VESCA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1524; 2nd. ed., t. 727; and our *fig. 1*, in Pl. 33. | foot-stalks widely spreading; those of the partial flower-stalks close-pressed, silky. (*Smith.*)

SPECIFIC CHARACTER.—Calyx of the fruit reflexed. Hairs of the

DESCRIPTION, &c.—Everybody knows the Wood Strawberry, and there are few plants more common, particularly in the north of England, where there is scarcely a thicket to be found in which it is not abundant. The wild Strawberry, which is a perennial, has a small white flower, the first of which opens about May, but a succession of these flowers continues till September; the plant bearing flowers and fruit at the same time. There is a variety of the common Wood Strawberry, the leaves of which continue green all the winter. In the wild Strawberry the peculiar botanical construction of the genus is more conspicuous than in the cultivated kinds; as the dry nuts which contain the seeds are larger in proportion to the dilated receptacle, and the receptacle itself is less succulent.

THE HAUTBOY STRAWBERRY. (F. MOSCHATA, *Duchesne.*)

This is only a doubtful native, but it is found occasionally in Wales, Herefordshire, and some of the southern counties of England. Both the flowers and fruit have a musky scent, which is particularly strong when the plant is in a wild state. The wild plant, however, like the Hautboys of the gardens, is a very capricious bearer, owing to the male and female flowers being on different plants. The name of Hautboy is derived from *Haut-bois*, from its being originally found in France only in woods in alpine situations.

## GENUS VI.

THE CINQUEFOIL. (POTENTILLA, *Lin.*)*Lin. Syst. ICOSANDRIA POLYGYNIA.*

GENERIC CHARACTER.—Calyx concave, 4 or 5-cleft, with 4 or 5 external bracteoleæ. Petals 5. Stamens indefinite. Fruit consisting of numerous small nuts, placed upon a dry elevated receptacle. Seed inverted. | Herbaceous plants, or shrubs. Leaves compound. Stipules adhering to the petiole. Flowers white, yellow, or purple. (*Lindley.*)

DESCRIPTION, &c.—The genus *Potentilla* differs from the Strawberry principally in its fruit, the receptacle of which is dry, instead of being succulent. The plants are generally perennials; but the genus contains a few shrubs, one of which is a native of Britain. All the species are quite hardy, and grow better in cool situations than in warm ones. The name of *Potentilla* is derived from *potens*, powerful, in allusion to the medicinal properties attributed to some of the species. The genus is placed in the same Linnæan class and order as the Strawberry, and for the same reasons.

§ 1.—*Petals 5, obtuse. \*Leaves pinnate.*

1.—THE SHRUBBY CINQUEFOIL. (*POTENTILLA FRUTICOSA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 88; 2nd ed., t. 729; and our *fig. 2*, in Pl. 33.

SPECIFIC CHARACTER.—Leaves pinnate, entire, hairy. Stem shrubby. (*Smith.*)

DESCRIPTION, &c.—This very handsome species of *Potentilla* grows wild in some parts of Yorkshire and in Ireland. It is very commonly cultivated in gardens, where it grows three or four feet high. The flowers are produced singly at the points of the branches, and are of a bright yellow. They appear in June and July.

2.—THE WILD TANSY. (*POTENTILLA ANSERINA, Lin.*)

SYNONYMES.—Silver-weed; Goose-weed; Maskorn.

ENGRAVINGS.—Eng. Bot., t. 861; 2nd ed., t. 730; and our *fig. 3*, in Pl. 33.

SPECIFIC CHARACTER.—Leaves interruptedly pinnate, serrated, silky.

Stem creeping. Stalks axillary, solitary, single-flowered. (*Smith.*)

DESCRIPTION, &c.—This beautiful little plant is one of the most common British weeds; as it is found in all situations where water has lain through the winter, or where there is a natural moistness in the soil. It is exceedingly beautiful, both from its bright yellow flowers, and its light green and silvery foliage. It has creeping runners like the Strawberry, which enable it to spread rapidly when it has once taken root. The leaves very much resemble those of the Tansy, but it has not the strong smell of that plant. Silver-weed alludes to the silky down which covers the leaves, sometimes on both sides. The plant is a perennial, and its flowers appear in June and July.

THE STRAWBERRY-FLOWERED CINQUEFOIL. (*P. RUPESTRIS, Lin.*)

This plant has only been found in Montgomeryshire. The flowers are of a pure white, and bear so striking a resemblance to those of the Strawberry as only to be distinguished on a close examination. The plant is a perennial, and it flowers in June.

\* \* *Leaves digitate.*

3.—THE ALPINE CINQUEFOIL. (*POTENTILLA ALPESTRIS, Haller.*)

SYNONYMES.—*P. salisburgensis, Hænke*; *P. aurea, Smith*; *P. verna β. Wahlenb.*; *P. verna γ. Nestler.*

ENGRAVINGS.—Eng. Bot., t. 561; 2nd ed., t. 734.

SPECIFIC CHARACTER.—Leaflets 5, wedge-shaped, hairy, deeply cut in the upper half. Upper stipules ovate. Petals heart-shaped. Stems ascending. (*Smith.*)

DESCRIPTION, &c.—This species is very common on the mountains of the north of England, Wales, and Scotland, where its flowers, which are of a brilliant orange, are produced in June and July. It is, botanically, very nearly allied to *P. verna*, but they are very distinct in appearance. The plant is a perennial.

4.—THE COMMON CREEPING CINQUEFOIL. (*POTENTILLA REPTANS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 862; 2nd ed., t. 737; and our *fig. 4*, in Pl. 33.

SPECIFIC CHARACTER.—Leaflets 5, obovate, serrated. Stem creeping. Stalks axillary, single-flowered. (*Smith.*)

DESCRIPTION, &c.—This species is very common, particularly on the banks of hedges, and by road-sides. It is also found in many other situations; and, as its wiry stems spread rapidly and produce abundance of shoots at every joint, it very soon forms a splendid mass of bright yellow flowers. This plant was formerly in great repute, both in cases of fever, and as an antiseptic. Culpeper also recommends it for the ague, and it is droll, in these days of general education, to see what strange notions were entertained by even well educated people a century and a half ago. Culpeper says, "Some hold that one leaf cures a quotidian, three a tertian,

and four a quartan ague, and a hundred to one if it be not Dioscorides, for he is full of such whimsies. The truth is, I never stood so much upon the number of the leaves, nor whether I gave it in powder or decoction : if Jupiter were strong, and the moon applying to him or his good aspect at the gathering of it, I never knew it miss the desired effects." Such were the opinions of our forefathers, and even in the present day the virtues of this herb are strongly believed in by many country people. It is also said to be from the medicinal properties of this species that the genus takes its name of *Potentilla*. The plant is a perennial, and it flowers from June till August.

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THE HOARY CINQUEFOIL. (P. ARGENTEA, *Lin.*)

This is a tolerably common plant, though it is seldom found except in a gravelly soil. The plant is half shrubby ; and the flowers, which continue nearly all the summer, are very small, though they are of a bright yellow. The plant takes its specific name from the silky down which covers the under side of the leaves, and makes them look quite silvery.

THE SPRING CINQUEFOIL. (P. VERA, *Lin.*)

This species is very common in dry, hilly ground, and it is the earliest flowering of all the *Potentillas*, its blossoms appearing in April and May. It varies very much, and probably many supposed species are only varieties of it. Among these, *P. opaca*, which is sometimes, though very rarely, found on the Scotch mountains, is probably one.

THE WHITE ROCK CINQUEFOIL. (P. ALBA, *Lin.*)

This very pretty species, which is very common in gardens, is but rarely found wild in England. Its flowers are of a snow-white, and they continue to be produced in succession nearly all the summer.

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\* \* \* Leaves ternate.

5.—THE BARREN STRAWBERRY. (POTENTILLA FRAGARIA, *Dec.*)

SYNONYMES.—P. *Fragariastrum*, *Ehrhart* ; P. *Fragarioides*, *Vil-lars* ; *Fragaria sterilis*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 1785 ; 2nd ed., t. 739.

SPECIFIC CHARACTER.—Leaflets 3, roundish-ovate, serrated, hairy. Stems prostrate. Fruit corrugated, hairy at the scar. (Smith.)

DESCRIPTION, &c.—This plant so closely resembles the Strawberry, even when in flower, that it can scarcely be distinguished from it. When it is in fruit, however, it is easily recognised for a *Potentilla* by the dryness of the receptacle. The plant is a perennial, and it produces its white flowers in March and April.

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THE TRIFID-LEAVED CINQUEFOIL. (P. TRIDENTATA, *Solander.*)

This plant is rare, having been only found by Mr. G. Don on the mountains of Angus-shire.

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§ 2.—Petals 5, acuminate.

6.—THE MARSH CINQUEFOIL, OR PURPLE MARSHLOCKS. (POTENTILLA COMARUM, *Scopoli.*)

SYNONYMES.—P. *palustris*, *Lehm.* ; P. *rubra*, *Haller* ; *Comarum palustre*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 172 ; 2nd ed., t. 744 ; and our fig. 5, in Pl. 33.

SPECIFIC CHARACTER.—Leaves with close lobes. Stipules broad, coriaceous. Petals less than the calyx. Fruit ovate, compressed, smooth. (Dec.)

DESCRIPTION, &c.—This species was formerly made a distinct genus ; but it having been found that the principal distinction between it and the *Potentillas* consists in the shape of its petals, Professor De Candolle

has replaced it in the genus *Potentilla*. The plant is a perennial, and produces its dark purple flowers in July and August. The root, which is creeping, yields a yellow colour, and is so astringent as to be sometimes used in dyeing. The plant is common in peat-bogs and marshes in various parts of Great Britain and Ireland, particularly towards the north.

§ 3.—*Petals four.*

7.—THE COMMON TORMENTIL. (*POTENTILLA TORMENTILLA*, *Sibth.*)

SYNONYMES.—*P. tetrapetala*, *Haller*; *Tomentilla crecta*, *Lin.*; *T. officinalis*, *Smith*.

ENGRAVINGS.—Eng. Bot., t. 863; 2nd ed., t. 740.

SPECIFIC CHARACTER.—Stem ascending, branched. Leaves almost sessile. Stipulas cut. (*Smith.*)

DESCRIPTION, &c.—This plant is very common on heaths and moors, where it produces its bright yellow flowers in June and July. The root, which is large, is woody and a powerful astringent. In the Orkney Islands it is employed to tan leather. The Laplanders use it for dyeing red.

8.—THE TRAILING TORMENTIL. (*POTENTILLA NEMORALIS*, *Nestl.*)

SYNONYMES.—*P. procumbens*, *Sibth.*; *Tomentilla reptans*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 864; 2nd ed., t. 741; and our fig. 6, in Pl. 33.

SPECIFIC CHARACTER.—Stem prostrate, scarcely branched. Leaves stalked. Stipulas undivided. (*Smith.*)

DESCRIPTION, &c.—This species bears a very close resemblance to the Creeping Cinquefoil (*P. reptans*); but the runners do not root at the joints, and the flowers have generally only four petals. It is common in many parts of England, but it is only found in a dry, gravelly, or sandy soil. The plant is a perennial, and the flowers appear in June and July.

GENUS VII.

THE SIBBALDIA. (*SIBBALDIA*, *Lin.*)

*Lin. Syst. PENTANDRIA PENTAGYNIA.*

GENERIC CHARACTER.—Calyx concave, 5-cleft, with 5 external bractolæ. Petals 5. Stamens 5. Fruit consisting of 5 small nuts, placed upon a dry receptacle. Seed inverted. Herbaceous plants, with compound leaves and yellow flowers. (*Lindley.*)

DESCRIPTION, &c.—There is only one species in this genus, viz. *S. procumbens*, *Lin.* It is a little perennial plant, which has only been found on the summit of the Highland mountains. The leaflets are wedge-shaped, with three terminal teeth; and the flowers, which are produced in July, are of a bright yellow, but very small. The name of *Sibbaldia* was given to this plant in honour of Robert Sibbald, who wrote on the Natural History of Scotland in the seventeenth century, and who first published a figure of the only British species of the genus. It is placed in the Linnæan class *Pentandria*, on account of its five stamens; and in the order *Pentagynia*, from its five styles.

GENUS VIII.

THE AVENS. (*GEUM*, *Lin.*)

*Lin. Syst. ICOSANDRIA POLYGYNIA.*

GENERIC CHARACTER.—Calyx concave, 5-cleft, with 5 external bractolæ. Petals 5. Stamens indefinite. Fruit consisting of numerous small nuts, tipped with the indurated persistent naked styles, and placed upon a dry receptacle. Seed ascending. Herbaceous plants, with compound leaves. Flowers white or yellow. (*Lindley.*)

DESCRIPTION, &c.—This genus consists of hardy herbaceous plants; the qualities of which are astringent, and slightly aromatic. The name of the genus is said to be derived from a Greek word signifying to give a



1 Wood Strawberry 2 Shrubby Cinquefoil 3 Wild Tansey 4 Common creeping Cinquefoil  
 5 Marsh Cinquefoil, or Purple Marshlocks 6 Trailing Tormentil 7 Water Avens 8 Mountain Avens



flavour or relish. The genus is placed in the Linnæan class Icosandria, from its twenty stamens; and in the order Polygynia, from its numerous styles.

### 1.—THE COMMON AVENS, OR HERB BENNET. (GEUM URBANUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1400; 2nd ed., t. 742.

SPECIFIC CHARACTER.—Leaves ternate; radical ones somewhat lyrate. Stipulas rounded, cut. Flowers nearly upright. Styles naked. (Smith.)

DESCRIPTION, &c.—This is a very well-known plant, which is common in woods and hedges all over England, and which produces its pretty yellow flowers from June till August. The receptacle is very much elevated, and the styles of the carpels, being long and hooked, when dry stick to any object that touches them. The root was formerly highly valued in domestic medicine; and wine which the roots have been boiled in, is still reckoned to be very efficacious in many diseases. The plant is also said to prevent ale from turning sour; and it was formerly supposed to be a remedy against the plague. The plant is a perennial, and it flowers from June till August.

### 2.—THE WATER AVENS. (GEUM RIVALE, *Lin.*)

VARIETIES.—G. r.  $\beta$ . intermedium, *Seringe*, G. intermedium, *Ehrh.*; G. r.  $\gamma$ . luxurians, *Trattennich*, G. hybridum, *Wulf.*

ENGRAVINGS.—Eng. Bot., t. 106; 2nd ed., t. 743; and our fig. 7, in Pl. 33.

SPECIFIC CHARACTER.—Radical leaves interruptedly pinnate, somewhat lyrate. Stipulas ovate, acute, cut. Flowers drooping. Styles hairy above the curvature. (Smith.)

DESCRIPTION, &c.—This plant is very common in marshy ground on the borders of ponds or ditches, particularly in the north of England. It is a perennial, and produces its flowers in June and July. One of the varieties has hairy leaves, and the other has semidouble flowers with distinct leafy sepals. The root of both the species and varieties is used in medicine, like that of the common Avens.

## GENUS IX.

### THE MOUNTAIN AVENS. (DRYAS, *Lin.*)

*Lin. Syst. ICOSANDRIA POLYGYNIA.*

GENERIC CHARACTER.—Calyx 8 or 9-parted, without external bracts. Petals 8 or 9. Stamens indefinite. Fruit consisting of numerous small nuts, tipped with the persistent feathery styles, and

placed on a dry receptacle. Seed ascending. Herbaceous plants, with simple leaves, hoary beneath, and white flowers. (Lindley.)

DESCRIPTION, &c.—This genus differs but slightly from the common Avens; the principal points of distinction being, that the sepals and petals are more numerous in *Dryas* than in *Geum*, and that the styles are feathery instead of being naked. The leaves are also simple and hoary beneath, instead of being compound. The plant is called *Dryas* from the Greek name for the Oak, on account of some imagined similarity in the leaves. It is placed in the same Linnæan class and order as the preceding genus.

### 1.—THE COMMON MOUNTAIN AVENS. (DRYAS OCTOPETALA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 451; 2nd ed., t. 745; and our fig. 8, in Pl. 33.

SPECIFIC CHARACTER.—Petals 8. Leaves oblong, notched, downy beneath. (Lindley.)

DESCRIPTION, &c.—This very beautiful plant is the only one of its genus that is found wild in Great Britain. Its beautiful large white flowers appear in June and July, and are very conspicuous from the manner in which the plant throws out its runners, which take root and form patches, often of considerable

extent. It is found abundantly in the north of England, but it has not been observed farther south than Yorkshire. It is common in Ireland. The leaves are singular in their shape, being indented or sinuated somewhat like those of the Oak.

### GENUS X.

#### THE AGRIMONY. (AGRIMONIA, *Lin.*)

*Lin. Syst.* DODECANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx turbinate, 5-eleft, without external bracteolæ, covered with rigid hooked bristles. Petals 5. Stamens 15. Fruit consisting of 2 membranous small nuts inclosed in the indurated tube of the calyx. Seed suspended. Herbaceous plants with compound leaves. Flowers in spikes, yellow. Bractæ trifid. (Lindley.)

DESCRIPTION, &c.—There is only one species of this genus a native of Great Britain. The genus takes its name from its being supposed to cure a cataract in the eye, the Greek word for which bears considerable resemblance to *Agrimonia*. It is placed in the Linnæan class Dodecandria, because it has more than twelve and less than twenty stamens; and in the order Digynia, because it has two styles.

#### 1.—THE COMMON AGRIMONY. (AGRIMONIA EUPATORIA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1335; 2nd ed., t. 684.

SPECIFIC CHARACTER.—Stem-leaves pinnate; leaflets elliptic-oblong; terminal one stalked. Calyx encompassed with bristles. Spikes elongated. (Smith.)

DESCRIPTION, &c.—This species is very common in the waste parts of corn fields, and on road sides, where it produces its yellow flowers in June and July. The whole plant is hairy. The stem grows erect to the height of about two feet, and it has somewhat the appearance of a small Verbascum. It is a perennial, and the roots are strong and woody. The qualities of the whole plant are tonic, and the flowers, when newly gathered, smell like apricots.

### IV.—THE ROSE TRIBE.

The fruit of the plants contained in this tribe consists of numerous hairy nuts, inclosed in the fleshy tube of the calyx, which is contracted at the orifice, and forms what is called a hip. The seed is suspended in the nut. The flowers have five distinct sepals and five petals, forming a cup-shaped corolla, with numerous stamens. The plants are generally shrubs, with prickly or naked stems, and pinnate leaves with large stipules.

### GENUS XI.

#### THE ROSE. (ROSA, *Lin.*)

*Lin. Syst.* ICOSANDRIA POLYGYNIA.

GENERIC CHARACTER.—Nuts numerous, hairy, terminated by the persistent style, and inclosed within the fleshy tube of the calyx, which is contracted at the orifice, where it is surrounded by a fleshy disk. Seed suspended. Sepals 5. Petals 5. Stamens indefinite. Shrubs with prickly or naked stems. Leaves pinnate. Flowers red, white, or yellow, usually fragrant. (Lindley.)

DESCRIPTION, &c.—Everybody knows that the Dog Rose is a native of this country; but few are aware of the great number of other species that are also British plants. Many of them, however, so strongly resemble each other, that they may be all reduced to only five or six distinct sections. The word *Rosa* is supposed to be derived from the Celtic word *Rhos*, red. The genus is placed in the Linnæan class Icosandria, because it has twenty stamens inserted in the calyx; and in the order Polygynia, from its numerous styles.

§ 1.—*Branches bristly, sometimes unarmed. Flowers furnished with bracts. Leaflets lanceolate or oblong, without glands. Divisions of the calyx very long. Disk thin.*

1.—DICKSON'S ROSE. (*Rosa Dicksoniana, Lindley.*)

ENGRAVINGS.—Eng. Bot., t. 2707; 2nd ed., t. 705\*.

SPECIFIC CHARACTER.—*Branches flexuose, armed with a few slender scattered prickles. Leaflets folded together, unequal, with coarse*

double serratures. Stipules, petioles, and scaps glandular; the latter

equal. Fruit naked. (*Lindley.*)

DESCRIPTION, &c.—This elegant species of Rose is a native of Ireland; and it is easily distinguished by the very long segments of its calyx, which remain on when ripe. The branches are of a bright red, and they are very long and flexible. The leaves generally consist of seven large oval leaflets, which are covered on both sides with a fine pubescence. The bracts are concave, and sometimes terminate in two or three small leaflets. The fruit, which is large and pitcher-shaped, with a long and somewhat taper neck, is either quite smooth, or has a few widely scattered glandular hairs. It is, when ripe, of a deep orange red. The flowers appear in May and June.

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THE CINNAMON-SCENTED ROSE. (*R. CINNAMOMEA, Lin.*)

This species, which is generally included in the British flowers, is omitted by Dr. Lindley, as he says there is “no good evidence of its having been found wild in this country.”

§ 2.—*Branches bristly, sometimes unarmed. Flowers without bracts. Leaflets usually small, and ovate. Sepals converging, not separating from the fruit. Disk very thin.*

2.—THE BURNET ROSE. (*Rosa spinosissima, Lin.*)

SYNONYME.—*R. pimpinellifolia, Sabine.*

ENGRAVINGS.—Eng. Bot., t. 187; 2nd ed., t. 707; and our fig. 1, in Pl. 34.

SPECIFIC CHARACTER.—*Prickles very unequal. Leaflets flat, smooth,*

*simply serrated. Fruit globosc, erect. (*Lindley.*)*

DESCRIPTION, &c.—This very pretty little Rose is remarkable for the small size and compact form of its leaflets, of which there are generally seven to each leaf. The prickles are numerous, and vary considerably in size; some being very large, and others very small. The plant forms a low compact bush; increasing rapidly by suckers, and having round and nearly black fruit. The flowers, which are cream-colour slightly tinged with pink, appear in May and June. The species is tolerably common on sandy heaths in various parts of England, but it is most abundant near the sea.

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THE RED-FRUITED DWARF ROSE. (*R. RUBELLA, Smith.*)

This species, which is seldom found except on the sandy shore of the north of England, is distinguished from *R. spinosissima* by its equal prickles, and by its fruit, which is oblong, crimson, and pendulous, instead of being round, black, and erect. The flowers do not open till June or July. They are delightfully fragrant, though their fragrance is mingled with a slightly acid smell. The petals are tinged with pink.

THE IRISH ROSE. (*R. HIBERNICA, Smith.*)

A very pretty Rose, with pale pink flowers, which it continues producing all the summer. It is found in the north of Ireland, near Belfast.

THE PRICKLY UNEXPANDED ROSE. (*R. INVOLUTA, Smith.*)

This is a dwarf bush; spreading widely by suckers, and seldom fully unfolding its pale pink flowers.

## WILSON'S ROSE. (R. WILSONI, Hooker.)

This species is very nearly allied to the last; but its flowers are of a beautiful dark pink, and its foliage takes a red hue towards the end of summer or the beginning of autumn. The fruit is of a brilliant orange scarlet.

## SABINE'S ROSE. (R. SABINI, Woods.)

This is another nearly allied species: it is one of the largest and handsomest of the British Roses. The stem frequently grows eight or ten feet high; the flowers are very large, and the leaflets large, handsome, and doubly serrated. *R. Doniana* is a variety of this Rose.

§ 3.—*Prickles nearly straight, and equal. Setæ none. Leaflets with diverging serratures, and turpentine glands. Sepals remaining upon the fruit. Disk thick, closing up the orifice of the tube.* (Lindley.)

## 3.—THE DOWNTY-LEAVED ROSE. (ROSA TOMENTOSA, Smith.)

SYNONYMES.—*R. foetida*, *Batard*; *R. scabriuscula*, *Eng. Bot.*; *R. subglobosa*, *Smith*.

ENGRAVINGS.—*Eng. Bot.*, t. 990; 2nd ed., t. 711.

SPECIFIC CHARACTER.—Root-shoots arched. Sepals compound, diverging. Leaflets oblong, downy on both sides. Fruit hispid, or naked. (Lindley.)

DESCRIPTION, &c.—This Rose is very common in hedges and thickets; and though it varies considerably in its appearance, yet it may always be distinguished by its long arched shoots, and the numerous segments of its calyx. It produces its very elegant pale pink flowers in June and July.

## 4.—THE SOFT-LEAVED ROSE. (ROSA MOLLIS, Smith.)

SYNONYMES.—*R. villosa*, *Smith*, not of *Linnæus*; *R. pulchella*, *Woods*; *R. heterophylla*, *Woods*; *R. resinosa*, *Lindl.*

ENGRAVINGS.—*Eng. Bot.*, t. 2459; 2nd ed., t. 710.

SPECIFIC CHARACTER.—Root-shoots erect, coloured. Sepals nearly simple, converging. Leaflets ovate, downy on both sides. Fruit hispid or naked. (Lindley.)

DESCRIPTION, &c.—This species is very nearly allied to *R. tomentosa*, and it resembles that species in the leaves being downy on both sides. The shoots, however, are never arched, and the segments of the calyx are not divided. *R. sylvestris* is probably only a variety of this species.

§ 4.—*Prickles very unequal, sometimes tipped with glands, very rarely absent. Leaflets ovate or oblong, usually fragrant and glandular, with diverging serratures. Sepals persistent. Disk thick, closing up the orifice of the tube.* (Lindley.)

## 5.—THE SWEET BRIAR, OR EGLANTINE. (ROSA RUBIGINOSA, Lin.)

SYNONYMES.—*R. cglanteria*, *Hudson*; *R. micrantha*, *Smith*; *R. umbellata*, *Leers*; *R. inodora*, *Agardh*; *R. Borreri*, *Woods*; *R. dumctorum*, *Eng. Bot.*

ENGRAVINGS.—*Eng. Bot.*, t. 991; 2nd ed., t. 714; and our fig. 2, in Pl. 34.

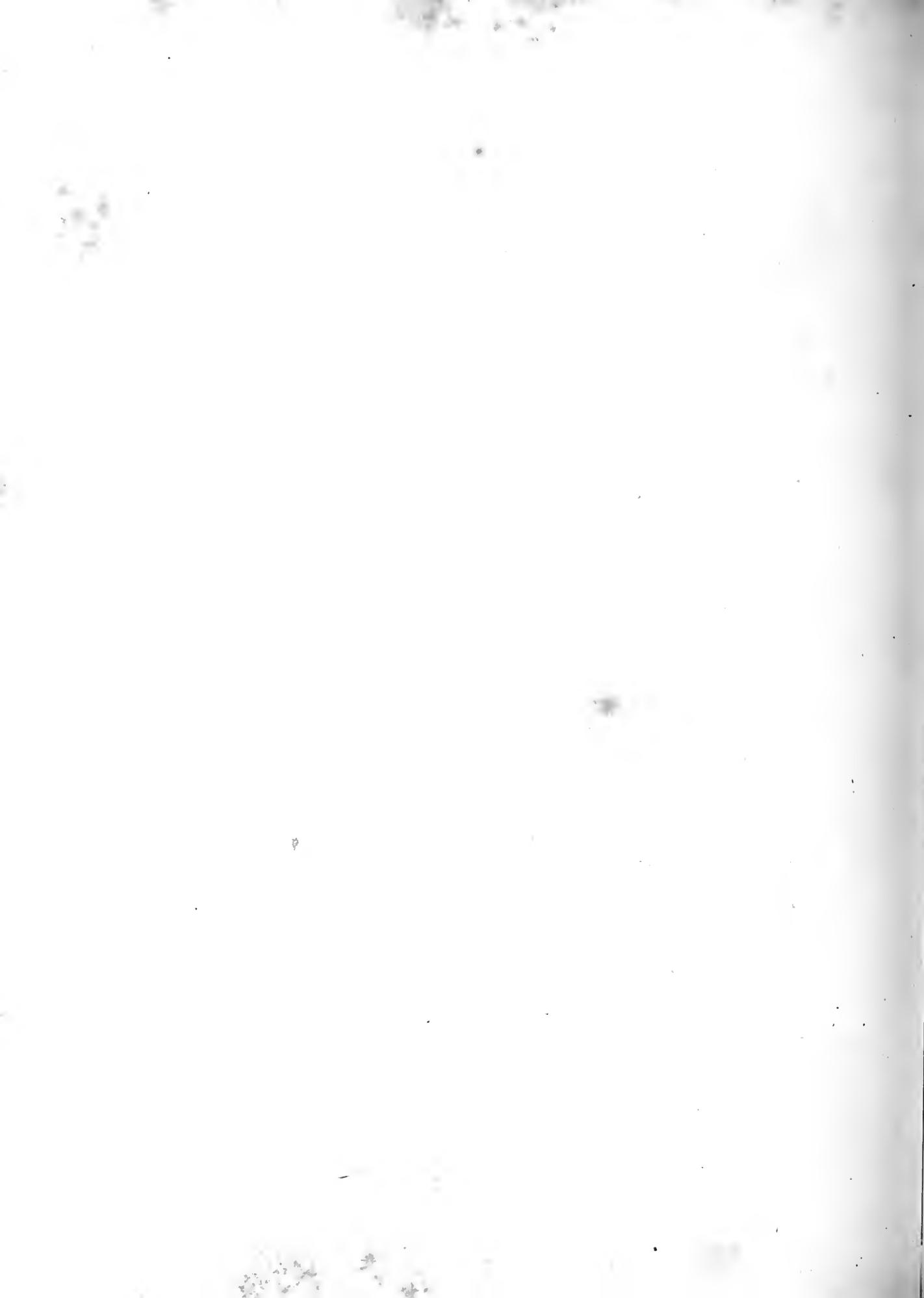
SPECIFIC CHARACTER.—Prickles much hooked. Leaflets rugose, not lucid, roundish-ovate, with fragrant brown glands at their margin, and on the underside. Calyxes and peduncles hispid. (Lindley.)

DESCRIPTION, &c.—Every one knows the Sweet Briar, as its delightful fragrance makes it a general favourite. It is common in hedges in every part of the kingdom, but it is most abundant in the southern counties in open, dry situations, and where the soil is chalky or sandy. It forms a compact, dense bush, with ascending shoots. The Sweet Briar has always been a favourite with the poets, and the following pretty lines are admirably descriptive of it:—

“ The breeze of spring, the summer's western wind,  
Rob of its odours not a sweeter flower,  
In all the blooming waste it leaves behind,  
Than that the Sweet Briar yields it; and the shower  
Wets not a Rose that buds in beauty's bower  
One half so lovely.”



1 Burnet Rose 2 Sweet Briar or Eglantine 3 Common Dog Rose 4 Ayshir Rose



Shenstone says:—

“ Come, gentle air ! and while the thickets bloom,  
Convey the Jasmine’s breath divine ;  
Convey the Woodbine’s rich perfume,  
Nor spare the sweet-leaved Eglantine.”

Moir, the *Delta of Blackwood’s Magazine*, calls it—

“ The Eglantine—the red Rose of the wood—  
Its cany boughs with threatening prickles arm’d,  
Rich in its blossoms and sweet-scented leaves.”

And Chaucer says—

“ The Eglantine exhaled a breath,  
Whose odours were of power to raise from death.”

The flowers of the Sweet Briar are pink, and they appear about June and July ; while the fruit, which ripens about September, is of a deep orange-red, and covered with bristles. *R. sepium*, which has pale pink flowers and very small leaves, is probably a variety of the Sweet Briar.

§ 5.—*Prickles equal, hooked. Leaflets ovate, without glands, with converging serratures. Sepals deciduous before the fruit is ripe. Disk thick, closing up the orifice of the tube.* (Lindley.)

#### 6.—THE COMMON DOG ROSE. (ROSA CANINA, Lin.)

SYNONYMS.—*R. surculosa, Woods ; R. glaucocephala, Winch ; R. sarmentacea, Woods.* | SPECIFIC CHARACTER.—Leaflets ovate, acute, smooth on both sides. Prickles falcate. (Lindley.)

ENGRAVINGS.—Eng. Bot., t. 992 ; 2nd ed., t. 715 ; and our fig. 3, in Pl. 34.

DESCRIPTION, &c.—The Dog Rose is one of the most common shrubs in British hedge-rows ; and, indeed, there are few parts of the country in which it is not abundant, and few hedges which are not decorated with its lovely blossoms in June and July. It varies very much in different soils and situations, particularly in colour ; but Sowerby says, it may always be easily distinguished by its “ smooth glossy green leaves, distinct included styles, and elongated oval fruit, from which the calyx-segments are deciduous.” The following beautiful lines addressed to this rose are by Burns :—

“ May’st thou long, sweet crimson gem,  
Richly deck thy native stem ;  
Till some ev’ning, sober, calm,  
Dropping dews, and breathing balm,  
While all around the woodland rings,  
And every bird thy requicm sings ;  
Then, amidst the diigful sound,  
Shed thy dying honours round,  
And resign to parent earth  
The loveliest form she e’er gave birth.”

The hips or fruit of the Dog Rose are very good to eat, from their pleasant flavour, and a kind of conserve of roses is sometimes made from them, though the medicine usually known by that name is prepared from the leaves of *Rosa gallica*. *R. dumetorum*, Thui., and *R. Forsteri*, Smith, appear to be only varieties of the common Dog Rose, but they are more hairy in the leaflets, and the flowers are of a paler colour. The name of Dog Rose was formerly given to all the wild roses, because their roots were thought to cure the bite of a mad dog.

THE GLAUCOUS-LEAVED DOG ROSE. (*R. cæsia*, *Smith.*)

This species closely resembles the common Dog Rose, but it is distinguished by its glaucous hue, and small but numerous leaflets. It is found principally in the Highlands.

§ 6.—*Styles cohering in the form of a column, protruded beyond the orifice of the tube of the calyx.* (*Lindley.*)

7.—THE CLOSE-STYLED ROSE. (*Rosa styyla*, *Batard.*)

SYNONYMES.—*R. collina*, *Smith*; *R. stylosa*, *Desvœux*.  
ENGRAVINGS.—Eng. Bot., t. 1895; 2nd ed., t. 717.

SPECIFIC CHARACTER.—Root-shoots nearly erect, arched. Prickles strong, hooked. (*Lindley.*)

DESCRIPTION, &c.—This species is remarkable for the length of its shoots, which sometimes ascend to the height of ten or twelve feet. It is common in almost every part of England; but it bears so close a resemblance in its general appearance to the common Dog Rose, as to be scarcely distinguishable from it by a common observer, though a botanist would know it instantly by the styles protruding beyond the orifice of the calyx, and cohering together so as to form a column. The flowers are pink, and they are produced in June and July.

8.—THE AYRSHIRE ROSE. (*Rosa arvensis*, *Hudson.*)

SYNONYMES.—*R. repens*, *Ehrh.*; the Trailing, or White Dog Rose.

ENGRAVINGS.—Eng. Bot., t. 188; 2nd ed., t. 718; and our fig. 4, in Pl. 34.

SPECIFIC CHARACTER.—Root-shoots long, trailing. Prickles unequal, falcate. Leaves deciduous, glaucous beneath. (*Lindley.*)

DESCRIPTION, &c.—The Ayrshire Rose is distinguished by its long trailing shoots, and large, white, slightly fragrant flowers; the fruit is rather small, and of a dark red, with a deep orange-coloured pulp. It is very common in different parts of England; and in a state of cultivation is the parent of many of our most beautiful trailing and climbing roses. It flowers in June and July, and continues producing a succession of blossoms all the season. Among the climbing and pillar roses which have sprung from this species, is the beautiful *Rosa ruga*, which is a hybrid between it and the Tea-scented China Rose, and which is perhaps the most beautiful of all its lovely race. The popular name of Ayrshire Rose, which is given to this species, is said to have originated from the Earl of Loudon introducing it into Ayrshire from America, supposing it not to be a native of Great Britain; and this assertion is supported by the fact that the Ayrshire Rose is in great abundance in the woods near Loudon Castle, in Ayrshire, though it is not found in any other part of Scotland, and is, in fact, a native of the southern counties of England. The following beautiful lines are supposed to have been addressed to this rose:—

“ 'Tis the Rose of the desert,  
So lonely and wild,  
On the green leaf of freedom  
Its infancy smiled.  
In the languish of beauty  
It buds o'er the thorn,  
And its leaves are all wet  
With the bright dews of morn.”

## V.—THE BURNET TRIBE.

The flowers have no petals, and only a green calyx, in the dry tube of which are generally two nuts. The British species belonging to this tribe are all herbaceous plants, with compound leaves, and very small greenish flowers.

## GENUS XII.

THE LADIES' MANTLE. (ALCHEMILLA, *Lin.*)*Lin. Syst.* TETRANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx 4-toothed, with 4 external bracteoleæ. | Seed suspended. Herbaceous plants. Leaves palmate, lobed, or cut. Petals none. Stamens 1 to 4. Nuts 1 or 2. Stigmas capitate. | Flowers corymbose, herbaceous. (*Lindley.*)

DESCRIPTION, &c.—The plants belonging to this genus are weeds with inconspicuous flowers, but with very beautiful leaves. The leaves, indeed, are so remarkably elegant, from the silky down, which forms a snow-white lining to their under surface, and their delicate serratures and folds, as to well deserve their popular English name of Ladies' Mantle. The flowers, which are small and green, are of no beauty, but they continue expanding all the summer. There are three British species, viz. *A. vulgaris*, *A. alpina*, and *A. arvensis*, which last is sometimes called "Parsley Piert," and is an annual. The others are perennials, and all of them require dry and open situations. The name of *Alchemilla* is derived from *alchemy*, from some supposed chemical virtues of the plants. Sir W. J. Hooker says that the English name of the plant should be Lady's Mantle, as it means the mantle of the Virgin Mary; but he does not say why this is supposed to be the case. The species are common in every part of Great Britain. The genus is placed in the Linnæan class Tetrandria, on account of its four stamens; and in the order Monogynia, from its generally single style.

## GENUS XIII.

THE GREAT BURNET. (SANGUISORBA, *Lin.*)*Lin. Syst.* TETRANDRIA MONOGYNIA.

GENERIC CHARACTER.—Flowers hermaphrodite. Calyx 4-cleft, | Stigma pencil-formed. Seed suspended. Herbaceous plants. Leaves with 2 external scales at the base. Petals none. Stamens 4. Nuts 2. | unequally pinnate. Flowers in dense spikes. (*Lindley.*)

DESCRIPTION, &c.—There are only two British species of this genus, and they differ very little from each other; *S. media* being only taller and larger than the common kind, and having a longer spike of paler flowers than *S. officinalis*. Both are strong-growing perennials, which flower in June and July, and require a rich and somewhat moist calcareous soil. The plants are most abundant in the north, and make good hay, though their qualities are astringent. The name of *Sanguisorba* is derived from two Latin words signifying to absorb blood, in allusion to the supposed vulnerary properties of the plants. This genus is placed in the same Linnæan class and order as the last, on account of its four stamens and its single style.

## GENUS XIV.

THE SALAD BURNET. (POTERIUM, *Lin.*)*Lin. Syst.* MONOCIA POLYANDRIA.

GENERIC CHARACTER.—Flowers monœcious or polygamous. Calyx 4-toothed, with 3 scales on the outside at the base. Petals none. | Herbaceous plants. Leaves unequally pinnate. Flowers in dense spikes. (*Lindley.*) Stamens 20 to 30. Nuts 2. Stigma pencil-shaped. Seed suspended.

DESCRIPTION, &c.—The only British species of this genus, *P. Sanguisorba*, was formerly used for salads in this country, as it still is in France. It is a perennial, with a strong woody stem, which grows abundantly in

dry open situations, particularly on calcareous soils. The leaves are succulent, and taste and smell like cucumber. The flowers, which are produced in July, are in globular bands, with the stamens of the outer flowers hanging down. The name of *Poterium* is that of a drinking-cup, and it is applied to this plant from its having been formerly used in the preparation of what was called a cool-tankard. The genus is placed in the Linnæan class Monœcia, because the stamens and pistils are in different flowers on the same plant; and in the order Polyandria, because it has numerous stamens.

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### CHAPTER XXXIII.

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#### THE APPLE FAMILY. (POMACEÆ, *Lindl.*)

CHARACTER OF THE ORDER.—Calyx superior, 5-toothed; the odd segment posterior. Petals 5, unguiculate, inserted in the throat of the calyx; the odd one anterior. Stamens indefinite, inserted in a ring in the throat of the calyx. Disk thin, clothing the sides of the limb of the calyx. Ovarium from 1 to 5-celled, seldom spuriously 10-celled; ovules usually 2, collateral, ascending, very rarely solitary;

styles from 1 to 5; stigmas simple. Fruit a pome, 1 to 5-celled, seldom spuriously 10-celled; the endocarp either cartilaginous, spongy, or bony. Seeds ascending, solitary. Albumen none; embryo erect, with flat cotyledons, and a short conical radicle. Trees or shrubs. Leaves alternate, stipulate, simple, or compound. Flowers in terminal cymes, white or pink. (*Lindley.*)

DESCRIPTION, &c.—The principal difference between Rosaceæ and Pomaceæ is, that in the Apple tribe the fruit is always a pome; that is, it is made up of a fleshy calyx, adhering to fleshy or bony ovaries, containing a definite number of seeds, which, when immature, are always found in pairs placed side by side, though it is by no means unusual for only one of the pair to ripen. The British genera contained in the Apple tribe are *Mespilus*, *Crataegus*, *Cotoneaster*, and *Pyrus*.

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### GENUS I.

#### THE MEDLAR. (MESPILUS, *Lin.*)

*Lin. Syst. ICOSANDRIA DI-PENTAGYNIA.*

GENERIC CHARACTER.—Segments of the calyx foliaceous. Petals roundish. Disk large, secreting much honey. Styles 2 to 5, smooth. Fruit turbinate, with the upper ends of the carpella exposed. Endo-

carpum bony. Trees with undivided leaves. Flowers solitary. (*Lindley.*)

DESCRIPTION, &c.—There is now only one British species left in the genus *Mespilus*, though the *Crataegus* and the *Cotoneaster* were formerly included in it. The genus is called *Mespilus* from the Greek word for a medlar. It is placed in the Linnæan class *Icosandria*, because it has more than twenty stamens inserted in the calyx; and in the order *Di-Pentagynia*, because there are sometimes two and sometimes five styles.

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#### 1.—THE COMMON MEDLAR. (MESPILUS GERMANICA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1523; 2nd ed., t. 694.

SPECIFIC CHARACTER.—Leaves lanceolate, a little downy. Flowers solitary, nearly sessile, terminal. Styles 5. (*Smith.*)

DESCRIPTION, &c.—The common Medlar has a remarkably handsome flower, which is solitary, and very much larger than those of any other plant belonging to the same Natural Order. The fruit is depressed and concave; and the tree in a wild state is thorny. It is rather a doubtful native, though it is found occasionally, apparently wild, in hedges in Cheshire, Surrey, and Sussex. The flowers are white, and they appear in May and June.

## GENUS II.

THE THORN. (CRATAEGUS, *Lin.*)*Lin. Syst.* ICOSANDRIA DI-PENTAGYNYIA.

GENERIC CHARACTER.—Segments of the calyx acute. Petals roundish. Styles 2 to 5. Fruit oval or round, concealing the upper ends of the carpella. Endocarpium bony. Trees with lobed leaves. Flowers cymose. (*Lindley.*)

DESCRIPTION, &c.—It may appear strange to those who know the great number of American Thorns which are now common in our gardens, that the only British species is the common Hawthorn. The name of *Crataegus* is derived from a Greek word signifying strength, in allusion to the hardness of the wood. The genus is placed in the same Linnaean class and order as the Medlar.

1.—THE COMMON HAWTHORN, OR WHITETHORN. (CRATAEGUS OXYACANTHA, *Lin.*)

SYNONYMS.—*Mespilus oxyacantha*, *Smith*; *May*.

ENGRAVINGS.—Eng. Bot., t. 2504; 2nd ed., t. 693; and our *fig.* 1, in Pl. 35.

SPECIFIC CHARACTER.—Leaves obovate, wedge-shaped, either entire, trifid, or cut, quite smooth and rather lucid. Flowers in corymbs, with from one to three styles. Calyx destitute of glands. (*Lindley.*)

DESCRIPTION, &c.—The common Hawthorn has always been a favourite with the poets, from Milton, who says,—

“Every shepherd tells his tale  
Under the hawthorn in the dale,”

to the poets of modern days; but perhaps the most beautiful descriptions of the Hawthorn are those of Goldsmith, Shakspeare, and Burns. The first is the author of the well-known lines which occur in the “Deserted Village,” beginning—

“The hawthorn bush, with seats beneath the shade,  
For talking age and whispering lovers made.”

Shakspeare, in *Henry VI.*, asks:—

“Gives not the hawthorn bush a sweeter shade  
To shepherds looking on their silly sheep,  
Than doth a rich embroider'd canopy  
To kings who fear their subjects' treachery?”

And Burns says,—

“The hawthorn I will pu', wi' its locks o' siller grey,  
Where, like an aged man, it stands at break o' day.  
But the songster's nest within the bush, I winna tak' away,  
And a' to be a posie for my ain dear May.”

The following beautiful lines by an old English poet (Herrick), allude to the popular name of May, which is often given to the flowers of the Hawthorn:—

“Come, my Corinna, come; and, coming, mark  
How each field turns a street, each street a park,  
Made green and trimm'd with trees; see how  
Devotion gives each house a bough,  
Or branch; each porch, each door, ere this,  
An ark, a tabernacle is,  
Made up of whitethorn neatly interwove,  
As if here were those cooler shades of love.  
Can such delights be in the street  
And open fields, and we not see 't?”

Come, we 'll abroad, and let 's obey  
The proclamation made for May,  
And sin no more, as we have done, by staying;  
But, my Corinna, come; let 's go a Maying.  
There 's not a budding boy or girl, this day,  
But is got up and gone to bring in May:  
A deal of youth, ere this, is come  
Back, and with whitethorn laden home.  
Come, let us go while we are in our prime,  
And take the harmless folly of the time.”

Birds are extremely fond of the fruit of the Hawthorn, and when the haws are very abundant it is generally considered that the winter will be very severe, as nature has provided so large a stock of food for the birds during that season. The Hawthorn is generally a bush when it grows in hedges, but in open situations it becomes a small tree. There are many varieties of the Hawthorn, but the most remarkable is the Glastonbury Thorn, which produces its blossoms in the winter. The Hawthorn is the badge of the clan Ogilvy.

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### GENUS III.

#### THE COTONEASTER. (COTONEASTER, *Lindley.*)

*Lin. Syst. ICOSANDRIA DI-PENTAGYNIA.*

GENERIC CHARACTER.—Flowers polygamous. Calyx turbinate, with 5 short teeth. Petals 5, small, erect. Stamens erect, the length of the teeth of the calyx. Fruit turbinate, with its nuts adhering to the side of the calyx, but not cohering in the centre. Bushes, with entire leaves, and cymose flowers. (*Lindley.*)

DESCRIPTION, &c.—This genus was formerly included in *Mespilus*, but it has been separated on account of several differences in its botanical construction. The name of *Cotoneaster* is said to be derived from *Cotoneum*, the Greek name for the Quince; but why it is applied to this genus it is difficult to say. The genus is placed in the same Linnaean class and order as the last. It is somewhat singular that a Nepal species of this genus (*C. microphylla*) abounds in prussic acid, though all the other kinds of *Pomaceæ* contain only malic acid.

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#### 1.—THE COMMON COTONEASTER. (COTONEASTER VULGARIS, *Lindl.*)

SYNONYME.—*Mespilus Cotoneaster*, *Lin.*

ENGRAVINGS.—Eng. Bot. Supp., t. 2713; 2nd ed., t. 694 \*; and our *fig. 2*, in Pl. 35.

SPECIFIC CHARACTER.—Leaves ovate, rounded at the base. Calyxes and peduncles smooth. (*Dec.*)

DESCRIPTION, &c.—The British species of *Cotoneaster* has been only found in Wales. It flowers in May, and its fruit, which is very agreeable to the taste, is ripe in July. The flowers, which are pinkish, are very small, but they are rather pretty, and the leaves are very neat and compact. It only grows on limestone cliffs hanging over the sea.

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### GENUS IV.

#### THE PEAR TRIBE. (PYRUS, *Lin.*)

*Lin. Syst. ICOSANDRIA DI-PENTAGYNIA.*

GENERIC CHARACTER.—Calyx 5-toothed. Petals roundish, spreading. Styles 2, 3, or 5. Fruit fleshy, with 5 distinct cells. Endocarpium cartilaginous. Seeds 2 in each cell. Testa cartilaginous. Trees, with serrated, undivided, or pinnated leaves, and cymose flowers. Bracts deciduous. (*Lindley.*)

DESCRIPTION, &c.—This genus is divided into two distinct sections, in one of which the leaves are simple, and in the other pinnatifid: the first of these sections contains plants widely different from each other, such as the Pear, the Crab, and the White Beam Tree; and even in the second section, though there are only two species, the fruit of these are quite distinct in their forms. The name of *Pyrus* is derived from *peren*, the Celtic word for a pear. The genus is placed in the same Linnaean class and order as the *Cotoneaster*.



1 Common Hawthorn or Whitethorn. 2 Common Elder-  
3 Crab, or Wild Apple Tree. 4 Whitebeam Tree. 5 True Service Tree.



\* *Leaves simple.*

1.—THE WILD PEAR TREE. (PYRUS COMMUNIS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1784; 2nd ed., t. 695.

SPECIFIC CHARACTER.—Leaves simple, ovate, serrated. Flower-stalks corymbose. Fruit turbinate. (*Lindley.*)

DESCRIPTION, &c.—The Pear Tree in its wild state has generally a very handsome appearance, as its branches, though at first erect, soon begin to bend downwards at the point, so as to give the tree a pyramidal shape. There are few roots, and they descend perpendicularly, so that the tree requires a loose and deep soil. The leaves are generally covered with a whitish down; and the fruit is small, and very harsh. The tree is of great longevity; one having been known to live upwards of four hundred years. The wood is heavy, strong, of a fine grain, and slightly tinged with red. It was formerly used by wood engravers, particularly by Albert Durer, but has been long superseded by box. The wild Pear Tree is common in woods and hedges in every part of Great Britain; and it produces its large, handsome, snow-white flowers in April and May.

2.—THE CRAB, OR WILD APPLE TREE. (PYRUS MALUS, *Lin.*)

SYNONYME.—*Malus communis, Dec.*

SPECIFIC CHARACTER.—Leaves simple, serrated, rugose. Flowers

ENGRAVINGS.—Eng. Bot., t. 179; 2nd ed., t. 696; and our *fig. 3,*

in Pl. 35.

in a simple sessile umbel. Fruit round. (*Lindley.*)

DESCRIPTION, &c.—The wild Apple, or Crab, is common in the hedge-rows of every part of Great Britain; and it is extremely ornamental when in flower, from the beautiful pink tint which is found on the backs of the petals, particularly before the buds are fully expanded. The fruit of the wild Apple is very harsh, but when crushed it makes a strong but sour kind of cider, which, when properly treated, forms the kind of vinegar called verjuice. The flowers appear in May. The wild Apple Tree is the badge of the Highland clan Lamont.

3.—THE GRIPING WILD SERVICE TREE. (PYRUS TORMINALIS, *Smith.*)

SYNONYME.—*Crataegus torminalis, Lin.*

rated, 7-lobed; the lower lobes spreading. Flower-stalks corymbose,

ENGRAVINGS.—Eng. Bot., t. 298; 2nd ed., t. 697.

branched. (*Smith.*)

SPECIFIC CHARACTER.—Leaves simple, somewhat heart-shaped, ser-

DESCRIPTION, &c.—This very handsome tree is exceedingly abundant in the middle and southern counties of England, where it attains a considerable size. The flowers are white, and are produced in large terminal bunches in May and June; but the fruit, which is small and acid, does not ripen till late in autumn.

4.—THE WHITE BEAM TREE. (PYRUS ARIA, *Smith.*)

SYNONYMS.—*Crataegus Aria, Lin.*; *Mespilus Aria, Scop.*; *Sorbus Aria, Crantz.*; *Aria Theophrasti, L'Obel.*

SPECIFIC CHARACTER.—Leaves ovate, doubly serrated, hoary beneath.

Flowers in dense flat corymbs. Fruit pisiform. (*Lindley.*)

ENGRAVINGS.—Eng. Bot., t. 1858; 2nd ed., t. 701; and our *fig. 4,*

in Pl. 35.

DESCRIPTION, &c.—This well-known tree grows in great abundance in every part of Great Britain and Ireland, though it seldom attains a large size unless there is a mixture of some calcareous substance in the soil. It is remarkable for the whiteness of the under surface of the leaf, whence it is called the White Beam Tree. The Germans call it the Meal Tree, from the same circumstance. The flowers are produced in large terminal corymbs, and they appear in May. The fruit is small, and not at all agreeable to eat, as it is harsh and very

acid. The wood, which is hard and of a fine close grain, is used for making wheels, and also for making wooden spoons and various other articles. When first cut it has a very strong smell, but it loses this when it becomes dry ; and when dry, it is susceptible of a high polish.

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THE INTERMEDIATE WHITE BEAM TREE. (P. INTERMEDIA, *Ehr.*)

This only differs from the preceding species in the leaves being lobed.

THE HYBRID SERVICE TREE. (P. PINNATIFIDA, *Ehr.*)

This is supposed by De Candolle to be a hybrid between *P. intermedia* and the Mountain Ash.

* * Leaves pinnate.

5.—THE TRUE SERVICE TREE. (PYRUS DOMESTICA, *Smith.*)

SYNONYMES.—*Sorbus domestica*, *Lin.* ; *Pyrus Sorbus*, *Gærtn.*

ENGRAVINGS.—Eng. Bot., t. 350 ; 2nd ed., t. 698 ; and our fig. 5, in Pl. 35.

SPECIFIC CHARACTER.—Leaves pinnate ; leaflets uniform, downy beneath, serrated towards the point. Flowers panicled. Fruit obovate. (*Smith.*)

DESCRIPTION, &c.—The True Service is supposed not to be a true native of this country ; as in all the situations where it is found growing apparently wild there are evident traces of a garden. There are two distinct kinds of this species : the one with pear-shaped fruit, which has only been found in Wyre Forest, in Worcestershire ; and the other with apple-shaped fruit, which has been found in several places. The flowers are produced in May ; but the fruit is not eatable till it has been mellowed by the frost, in which state it bears a strong resemblance to that of the Medlar.

6.—THE MOUNTAIN ASH. (PYRUS AUCUPARIA. *Gærtn.*)

SYNONYMES.—*Sorbus aucuparia*, *Lin.* ; *Mespilus aucuparia*, *All.* ; the Quicken Tree ; Roan Tree.

ENGRAVINGS.—Eng. Bot., t. 337 ; 2nd ed., t. 699.

SPECIFIC CHARACTER.—Leaves pinnate ; leaflets uniform, serrated, smooth. Flowers corymbose. Styles about three. Fruit globular. (*Smith.*)

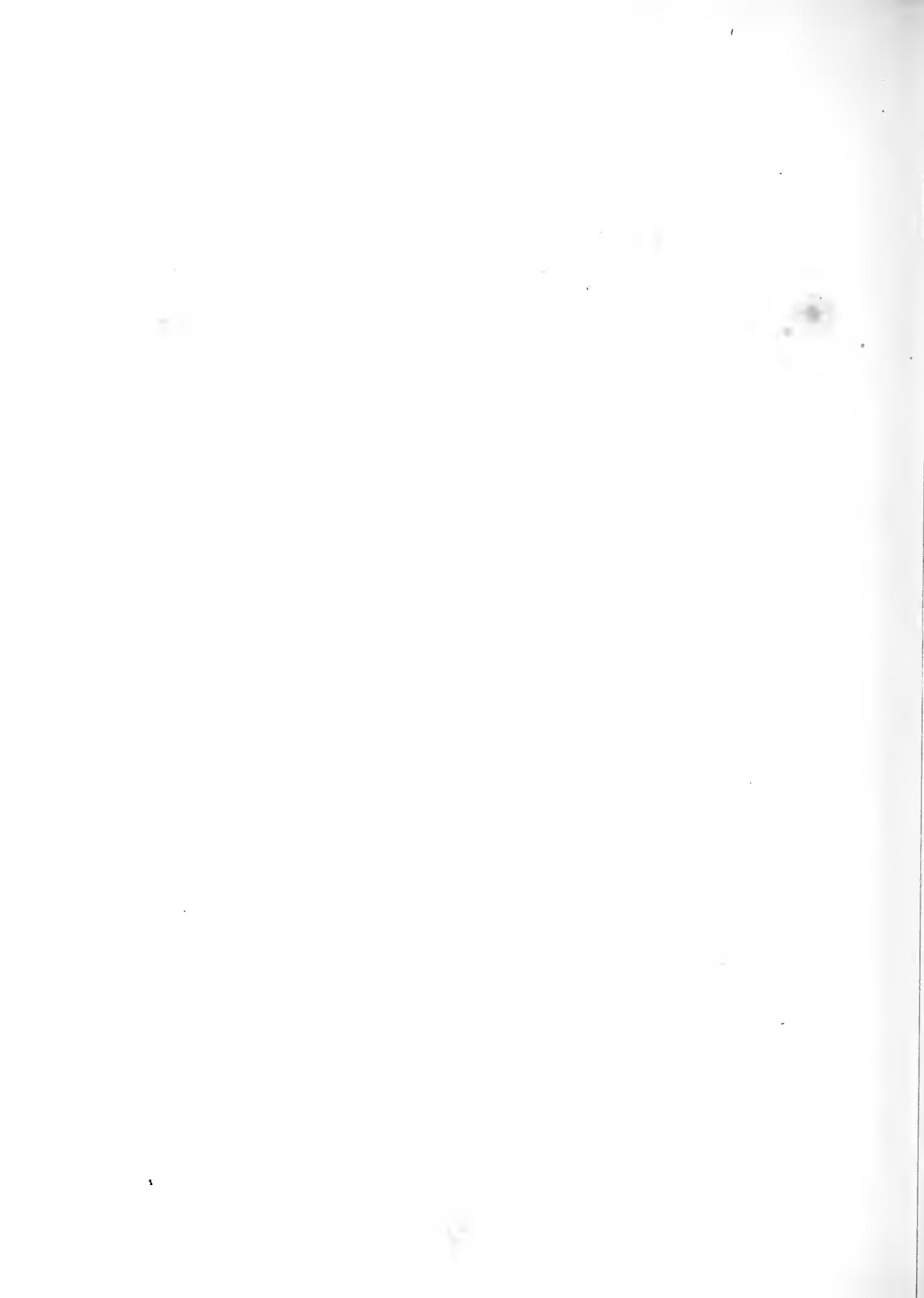
DESCRIPTION, &c.—The Mountain Ash is one of the commonest British trees, particularly in Scotland, where it is called the Roan or Rowan Tree. In England it rarely exceeds twenty feet in height, but in Scotland it is found sometimes forty or even fifty feet high. It was formerly believed to have extraordinary power against witches, as is recorded in one of the stanzas of a very ancient song, called “The Laidley Worm of Spindleston Heughs :”—

“ Their spells were vain ; the boys return’d
To the queen in sorrowful mood,
Crying that ‘ witches have no power
Where there is roan-tree wood.’ ”

And even at the present time, the country people in some parts of Scotland and Wales hang a piece of Mountain Ash at their doors, particularly when they are churning, to keep away the evil spirits. The flowers, which are white, appear in large corymbs early in May ; and the small, round, bright red berries are ripe in September. The tree is of slow growth, but it is valuable for its timber, as its wood, though it is of a remarkably fine close grain, is easily worked.



1 Common Red Currant 2 Spiked-flowered red, or Tree Currant.
3 Black Currant 4 Common Gooseberry



CHAPTER XXXIV.

THE CurrANT FAMILY. (GROSSULACEÆ, *Dec.*)

CHARACTER OF THE ORDER.—Calyx superior, four or five-parted, regular, coloured. Petals five, inserted in the throat of the calyx. Stamens five, inserted alternately with the petals. Ovarium one-celled, with two opposite parietal placentæ; ovules numerous; style two-three-four-cleft. Berry crowned with the remains of the flower, one-celled; the cell filled with pulp. Seeds numerous, suspended

among the pulp by long filiform funiculi; testa externally gelatinous, adhering firmly to the albumen, which is horny; embryo minute, ex-centrical, with the radicula next the hilum. Shrubs, either unarmed or spiny. Leaves alternate, lobed, with a plaited vernation. Flowers in axillary racemes, with bractæ at their base. (*Lindley.*)

DESCRIPTION, &c.—The only genus contained in this order is *Ribes*; and consequently all that can be said of it will be more appropriate under the head of the genus.

GENUS I.

THE RIBES. (*RIBES, Lin.*)

Lin. Syst. PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Petals five. Calyx bell-shaped, its border five-cleft, bearing the petals and stamens. Style cleft. Berry with many seeds. (*Smith.*)

DESCRIPTION, &c.—The genus *Ribes* is divided by botanists into two sections; the one containing the Currants, and the other the Gooseberries. The Currants are distinguished by their stems being without prickles, and their flowers generally in long racemes. The Gooseberries, on the contrary, have prickly stems, and the racemes seldom contain more than one or two flowers, or, at most, three. In the British species, the fruit of the Currant and that of the Gooseberry are sufficiently different not to require any botanical distinction; but in some of the North American species they approach so nearly together, that it is difficult to know to which division they belong when the fruit is seen apart from the plant. The word *Ribes* is the Arabic for an acid plant. The genus is placed in the Linnaean class *Pentandria*, from its five stamens; and in the order *Monogynia*, from its single style.

* *Without prickles. Currants.*

1.—THE COMMON RED CurrANT. (*RIBES RUBRUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1289; 2nd ed., t. 338; and our *fig. 1*, in Pl. 36.

SPECIFIC CHARACTER.—No prickles. Clusters smooth, pendulous. Flowers but slightly concave. Petals inversely heart-shaped. (*Smith.*)

DESCRIPTION, &c.—The Common Red Currant is found in several parts of Scotland, and in the North of England; growing generally in woods, where it forms a bush of from four to six feet high, and flowering in April and May. The fruit is rather acid, but it is far from disagreeable to eat.

2.—THE SPIKED-FLOWERED, OR TREE CurrANT. (*RIBES SPICATUM, Robson.*)

ENGRAVINGS.—Eng. Bot., t. 1290; 2nd ed., t. 340; and our *fig. 2*, in Pl. 36.

SPECIFIC CHARACTER.—No prickles. Spikes upright. Flowers nearly sessile. Petals oblong. Bractæ shorter than the flowers. (*Smith.*)

DESCRIPTION, &c.—This species is the most common in Britain; and it is well known under the name of the Tree Currant in the woods of Yorkshire and Durham. Its greatest peculiarity is its upright spike of fruit; and this, combined with its general tree-like character, makes it easily distinguished from the other species. The fruit is small and acrid. This plant is sometimes called the Acid Mountain Currant.

3.—THE BLACK CURRANT. (*RIBES NIGRUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1291; 2nd ed., t. 342; and our *fig. 3*, in Pl. 36.

SPECIFIC CHARACTER.—No prickles. Clusters hairy, pendulous, with a separate flower-stalk at the base of each. Flowers oblong. (*Smith.*)

DESCRIPTION, &c.—The Black Currant is exceedingly distinct, in every respect, from the Red Currant. The shrub is low and spreading, with soft smooth wood, and large buds. The leaves are large, soft, and have a most peculiar smell; and the fruit, which is black, is covered with an opaque skin, which is much thicker and tougher than that of the Red Currant. The plant is found in many parts of England and Scotland; always growing in a damp shady situation, and a sandy soil.

The Rock Currant (*R. petraeum*, Wulf.), and the Alpine Currant (*R. alpinum*, Lin.), appear to be only varieties of *R. spicatum*.

* * *Branches prickly.* Goosberries.

4.—THE COMMON GOOSEBERRY. (*RIBES GROSSULARIA, Lin.*)

SYNONYME.—*R. Uva crispa, Smith.*

VARIETY.—*R. G. reclinatum, Lindley.*

ENGRAVINGS.—Eng. Bot., t. 1292; 2nd ed., t. 343; and our *fig. 4*, in Pl. 36.

SPECIFIC CHARACTER.—Prickles one, two, or three under each bud. Branches otherwise smooth, spreading. Stalks single-flowered. Bracteas close together. Segments of the calyx reflexed, shorter than the tube. (*Smith.*)

DESCRIPTION, &c.—There are two very distinct kinds of Gooseberries; those with smooth fruit, and those the fruit of which is rough. The smooth-fruited kinds are generally much larger than the others, and the branches of the bushes are long and arched: they are usually called the Lancashire Gooseberries. The rough-fruited kinds have smaller fruit, but it possesses more flavour. The wild plant grows on old walls and in hedges; but it is only found in the north of England and in Scotland, and even there it is a doubtful native.

CHAPTER XXXV.

THE EVENING PRIMROSE FAMILY. (*ONAGRARIE, Juss.*)

CHARACTER OF THE ORDER.—Calyx superior, tubular, with the limb either 4 or 5-lobed; the lobes cohering in various degrees, with a valvate aestivation. Petals generally equal in number to the lobes of the calyx, into the throat of which they are inserted; regular, with a twisted aestivation. Stamens definite, inserted into the calyx; filaments distinct; pollen triangular, usually cohering by filaments. Ovarium of several cells, generally crowned by a disk; style filiform;

stigma either capitate or 4-lobed. Fruit baccate or capsular, many-seeded, with from 2 to 4 cells. Seeds numerous, without albumen; embryo straight; radicle long and taper; cotyledons very short. Herbaceous plants or shrubs. Leaves alternate or opposite, simple, entire, or toothed. Flowers red, purple, white, blue, or yellow, axillary, or in terminal spikes. (*Lindley.*)

DESCRIPTION, &c.—The species belonging to this order are all well-known weeds, some of which, such as the French Willow Herb and the Evening Primrose, are remarkable for their beauty; and for growing wild in the most dreary and desolate places. Botanically speaking, the plants belonging to this order are easily distinguished by all their parts being in fours; and the seed-vessel being so decidedly below the flower, as to seem a part of the stalk.

Flowers of the waste; the Epilobia throw
A rosy veil o'er what is drear below.

GENUS I.

THE EPILOBIUM. (EPILOBIUM, *Lin.*)*Lin. Syst. OCTANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx tubular, with a 4-parted limb, which falls off after flowering. Petals 4. Stamens 8. Capsule linear, bluntly 4-cornered, with four cells, four valves, and many seeds. | Seeds pappose. Herbaceous plants. Leaves opposite, or alternate. Flowers axillary and solitary, or terminal in spikes, purple or rose-colour. (*Lindley.*)

DESCRIPTION, &c.—The plants belonging to this genus are some of the commonest of our British weeds, and they spring up in astonishing abundance wherever the ground happens to be moist and somewhat rich. The name of *Epilobium* is from two Greek words, signifying upon the pod, in allusion to the position of the flower, which appears to be seated upon the seed-vessel. The genus is placed in the Linnaean class Octandria, on account of its eight stamens; and in the order Monogynia, from its single seed-vessel.

* Flowers irregular.

1.—THE PERSIAN, OR FRENCH WILLOW HERB. (EPILOBIUM ANGUSTIFOLIUM, *Lin.*)

SYNONYME.—The Rose-bay Willow Herb.

ENGRAVINGS.—Eng. Bot., t. 1947; 2nd ed., t. 542; and our fig. 1, in Pl. 37.

SPECIFIC CHARACTER.—Leaves scattered, linear-lanceolate, veiny, smooth. Petals unequal. Stamens declining. (*Smith.*)

DESCRIPTION, &c.—This is one of the most showy of the British wild flowers; and it may be seen growing to a considerable height, and producing abundance of its bright purple flowers, in every piece of marshy ground throughout the kingdom, in the months of July and August.

* * Flowers regular. Stigma deeply 4-cleft.

2.—CODLINGS AND CREAM. (EPILOBIUM HIRSUTUM, *Lin.*)SYNONYMS.—*E. ramosum*, *Hudson*; the Great Hairy Willow Herb.

ENGRAVINGS.—Eng. Bot., t. 838; 2nd ed., t. 543; and our fig. 2, in Pl. 37.

SPECIFIC CHARACTER.—Leaves half clasping the stem, ovate, lanceolate, hairy. Stem copiously branched. Root creeping. (*Smith.*)

DESCRIPTION, &c.—This species of *Epilobium* is, if possible, still more common than the French Willow Herb, and it is almost as ornamental. It is generally found in watery places; growing in ditches, or in half-dried pools, where its gay flowers are particularly acceptable from the dreary character of the surrounding scenery. It is a perennial, and spreads rapidly by its creeping roots. The whole plant is hairy, and slightly sticky when touched; it has also a somewhat acid but agreeable smell, bearing considerable resemblance to that of apples, and hence its popular English name of Codlings and Cream. The flowers appear in July. The seed-pods, which, when unripe, look like the stalks of the flowers, are remarkably long in this plant. The Small-flowered Willow Herb (*E. parviflorum*), is only distinguished from this species by its smaller flowers, narrower leaves, and unbranched stem.

3.—THE BROAD SMOOTH-LEAVED WILLOW HERB. (EPILOBIUM MONTANUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1177; 2nd ed., t. 545; and our fig. 3, in Pl. 37.

SPECIFIC CHARACTER.—Leaves stalked, ovate, toothed. Stem round. Stigma in four deep segments. (*Smith.*)

DESCRIPTION, &c.—This plant differs from most of the other species in being only found in dry, stony situations; whereas they almost always grow in marshy ground. It is a perennial, and produces its small rose-coloured flowers in July. The stem is crimson, and the leaves generally change to the same colour in autumn.

* * * *Flowers regular. Stigma undivided.*

4.—THE ALPINE WILLOW HERB. (*EPILOBIUM ALPINUM*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 2001; 2nd ed., t. 550; and our *fig.* 4, in Pl. 37.

SPECIFIC CHARACTER.—Leaves slightly stalked, elliptic-lanceolate,

obtuse, mostly entire. Stem decumbent, two or three-flowered. (*Lindley.*)

DESCRIPTION, &c.—This species is only found in the Highlands of Scotland; growing by the sides of mountain rivulets, where it produces its pretty little pink flowers close to the ground. The capsule becomes erect after the flowers fall, and is often as long as all the rest of the plant. The species is a perennial, with creeping roots; and the flowers are produced in July.

THE PALE WILLOW HERB. (*E. ROSEUM*, *Schreb.*)

This species is very nearly allied to *E. montanum*, from which it only differs in the stigma not being cleft. The Square-stemmed Willow Herb (*E. tetragonum*, *Lin.*), and the Marsh Willow Herb (*E. palustre*, *Lin.*), are probably only varieties of *E. roseum*.

THE CHICKWEED-LEAVED WILLOW HERB. (*E. ALSINIFOLIUM*, *Villars.*)

This species is very nearly allied to *E. alpinum*, but it is distinguished by its club-shaped stigma. It is a perennial, and it flowers in July.

GENUS II.

THE EVENING PRIMROSE. (*ŒNOTHERA*, *Lin.*)

Lin. Syst. OCTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx tubular, deciduous, with a reflexed four-parted limb; the segments of which cohere irregularly. Petals four. Stamens eight. Pollen cohering by threads. Stigma four-lobed. Capsule linear or winged, with four cells, four valves, and

many seeds. Seeds naked. Herbaceous plants. Leaves alternate, toothed, or pinnatifid. Flowers sessile, axillary, solitary, or in terminal spikes. (*Lindley.*)

DESCRIPTION, &c.—The Evening Primrose is well known from the numerous exotic species of the genus cultivated in British gardens. Only one species is, however, found wild in Britain, and even that is supposed to have been introduced from North America in the reign of Charles I. The name of *Œnothera* is derived from two Greek words, signifying wine-catcher, in allusion to the roots having been formerly used like olives, to give a relish to wine. Evening Primrose alludes to the flower being generally closed during the day, and only open at night. The genus is placed in the Linnaean class Octandria, on account of its eight stamens; and in the order Monogynia, from its single style.

1.—THE COMMON EVENING PRIMROSE. (*ŒNOTHERA BIENNIS*, *Lin.*)

SYNONYME.—Virginian Tree-Primrose.

ENGRAVINGS.—Eng. Bot., t. 1534; 2nd ed., t. 541; and our *fig.* 5, in Pl. 37.

SPECIFIC CHARACTER.—Leaves ovate-lanceolate, flat. Stem rough, somewhat hairy. Stamens equal. Petals undivided. (*Smith.*)

DESCRIPTION, &c.—Though the Evening Primrose is said to have been introduced from Virginia, in 1629, it grows in such abundance in this country, particularly near Liverpool, as to give it the character of a native. It is so abundant on the sand banks a few miles north of that town, and it grows so exactly in the same way as it does on the American shores of the Atlantic, that many persons have supposed it to be a true native, and that these wild plants are not descendants of the Evening Primrose introduced in the reign of Charles I. The



1. Persian or French Willow-Herb 2 Codling's Cream 3 Broad smooth-leaved Willow-Herb 4 Alpine Willow-Herb 5 Common Evening Primrose.



species is a biennial, and its pale yellow blossoms do not open till the evening, when they give out a delightful fragrance. The following beautiful lines on this flower are from Clare's *Rural Muse* :—

“ When once the sun sinks in the west,
And dew-drops pearl the evening's breast ;
Almost as pale as moon-beams are,
Or its companionable star,
The Evening Primrose opes anew
Its lovely blossoms to the dew ;
And, hermit-like, shunning the light,
Wastes its fair bloom upon the night,
Who, blindfold to its fond caresses,
Knows not the beauty she possesses.
Thus it blooms on while night is by ;
When day looks out with open eye,
'Bashed at the gaze it cannot shun,
It faints, and withers, and is gone.”

GENUS III.

THE ISNARDIA. (ISNARDIA, Lin.)

Lin. Syst. TETRANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx with a four-parted limb. Petals four, and a loculicidal dehiscence. Seeds many. Aquatic or marsh plants, or none. Stamens four, alternate with the petals. Style deciduous. Leaves entire, alternate, or opposite. Flowers axillary, sessile. (*Dec.*) Stigma capitate. Capsule four-cornered, four-celled, with four valves,

DESCRIPTION, &c.—The only species in this genus (*I. palustris*, Lin.) is a little insignificant marsh-plant, the flowers of which have no petals. It is an annual, and flowers in July. The genus is named in honour of a French botanist ; and it is placed in the Linnæan class and order Tetrandria Monogynia, from its four stamens and its single style.

CHAPTER XXXVI.

THE ENCHANTER'S NIGHTSHADE FAMILY. (CIRCEACEÆ, Lindley.)

CHARACTER OF THE ORDER.—Calyx superior, deciduous, tubular, with a two-parted limb. Petals two, alternate with the lobes of the calyx. Stamens two, alternate with the petals, inserted into the calyx. Disk large, cup-shaped, filling up the whole of the tube of the calyx, in each cell ; style simple, arising out of the disk ; stigma emarginate. Fruit two-celled, two-valved, two-seeded. Seeds solitary, erect ; albumen none ; embryo erect ; radicle short, inferior. Herbaceous plants. Leaves opposite, toothed, stalked. Flowers in terminal and lateral racemes, covered with uncinate hairs. (*Lindley.*)

DESCRIPTION, &c.—The only genus in this order is *Circea*, which takes both its English and scientific name from its supposed magical properties. It is said to be the herb which Circe gave to the companions of Ulysses to turn them into swine ; but if it was, it has greatly degenerated in modern times, for it has now no medicinal property whatever. There are two species in the genus, *C. lutetiana*, the Common Enchanter's Nightshade, and *C. alpina*, which is somewhat smaller in all its parts, and is only found in Westmoreland and Cumberland, and in some parts of Scotland. Both species are perennials with very small pink flowers, and their seeds covered with hooked bristles.

CHAPTER XXXVII.

THE HALORAGIS FAMILY. (HALORAGEÆ, *R. Brown.*)

CHARACTER OF THE ORDER.—Calyx superior, with a minute limb. Petals minute, inserted into the summit of the calyx, or wanting. Stamens inserted in the same place, equal in number to the petals, or occasionally fewer. Ovarium adhering inseparably to the calyx, with one or more cells. Style none; stigmata equal in number to the cells, papulose, or pencil-formed; ovula pendulous. Fruit dry, indehiscent,

membranous, or bony, with one or more cells. Seeds solitary, pendulous; albumen fleshy; embryo straight, in the axis; radicle superior, long and taper; cotyledons minute.—Herbaceous plants or undershrubs, often growing in wet places. Leaves either alternate, opposite, or whorled. Flowers axillary, sessile, occasionally monoeious or diœcious. (*Lindley.*)

DESCRIPTION, &c.—Only two genera of British plants belong to this order, both of which are aquatic weeds; but in New Zealand and South Australia there are several very handsome plants which are contained in it, and, among others, the *Loudonia*, which has not yet been introduced.

GENUS I.

THE WATER-MILFOIL. (MYRIOPHYLLUM, *Lin.*)

Lin. Syst. MONŒCIA POLYANDRIA.

GENERIC CHARACTER.—Flower generally bisexual.—Male. Calyx four-parted. Petals four, fugitive. Stamens four, six, or eight.—Female. Calyx with a four-lobed limb. Petals none. Fruit separable

into four hard nuts.—Aquatic floating plants, rising to flower. Leaves finely cut. Flowers minute, in whorls. (*Lindley.*)

DESCRIPTION, &c.—There are only two species of this genus which are natives of Britain, viz., *M. spicatum*, *Lin.*, which is a small delicate plant with finely-cut leaves, and *M. verticillatum*, *Lin.*, which is found only on the Welsh coast and in Norfolk and Cambridgeshire. They are both perennials with their leaves in whorls, and producing their small inconspicuous flowers in July. The name of *Myriophyllum* signifies thousand leaves, and is applied to this plant in allusion to the numerous very fine segments into which the leaves are divided. Water-Milfoil has a similar signification. The genus is placed in the Linnaean class Monœcia, on account of the male and female flowers being separate, though on the same plant; and in the order Polyandria, from its having numerous stamens.

GENUS II.

THE MARE'S-TAIL. (HIPPURIS, *Lin.*)

Lin. Syst. MONANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx with an entire limb. Petals none. Stamens one. Style filiform, lying in a channel of the anther. Ovarium one-celled, with a single pendulous ovulum. Fruit nuc-

mentaceous, one-celled, one-seeded.—Aquatic or mud herbaceous plants. Leaves linear, whorled. Flowers sessile, axillary, minute, sometimes polygamous. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species in this genus, viz., the Common Mare's-tail (*H. vulgaris*, *Lin.*), and it is a very common weed; growing in great abundance in ditches and pools during the months of May and June. After the plant has flowered, which it does abundantly, the stem and leaves which were above the water disappear, and only the roots and procumbent branches remain in the mud at the bottom. *Hippuris* is compounded of two Greek words, signifying Mare's-tail. The genus is placed in the Linnaean class Monandria, from its single stamen; and in the order Monogynia, from its single style. The leaves are eight or ten in a whorl, and the stem is hollow and jointed.

CHAPTER XXXVIII.

THE ARALIA FAMILY. (ARALIACEÆ, *A. Richard.*)

CHARACTER OF THE ORDER.—Calyx superior, entire or toothed. Petals definite, five to ten, deciduous, valvate in aestivation, occasionally absent. Stamens equal in number to the petals or twice as many, arising from within the border of the calyx, and from without an epigynous disk. Ovary inferior, with more cells than two; ovules solitary, pendulous; styles equal in number to the cells, sometimes

connate; stigmas simple. Fruit succulent or dry, consisting of several one-seeded cells. Seeds solitary, pendulous, adhering to the pericarp; albumen fleshy, having a minute embryo at the base, with its radicle pointing to the hilum. Trees, shrubs, or herbaceous plants, with, in all respects, the habit of Umbelliferæ. (Lindley.)

DESCRIPTION, &c.—This order was formerly considered to include the Ivy; but as that is now removed to Caprifoliaceæ, the only British plant included in it is the Moschatel, which has been removed to it from Saxifrageæ.

GENUS I.

THE MOSCHATEL. (ADOXA, *Lin.*)

Lin. Syst. OCTANDRIA TETRAGYNIA.

GENERIC CHARACTER.—Sepals four or five, united at the base. Petals none. Stamens eight or ten, perigynous. Disk obsolete. Styles four or five. Berry half inferior, of one cell, with four bordered seeds. Leaves compound. Flowers terminal, capitate, green. (Lindley.)

DESCRIPTION, &c.—There is only one species in this genus (*A. Moschatellina*, Lin.), a pretty little perennial plant which grows in groves and thickets, and produces its small yellow flowers in April and May. The name of *Adoxa* signifies not showy. The genus is placed in the Linnæan class Octandria, from its eight stamens; and in the order Tetragnynia, from its four styles.

CHAPTER XXXIX.

THE UMBELLIFEROUS FAMILY. (UMBELLIFERÆ, *Juss.*)

CHARACTER OF THE ORDER.—Calyx superior, either entire, or five-toothed. Petals five, inserted on the outside of a fleshy disk; usually inflexed at the point; aestivation imbricate, or valvate. Stamens five, alternate with the petals, incurved in aestivation. Ovarium inferior, two-celled, with solitary pendulous ovula; crowned by a double fleshy disk; styles two, distinct; stigmata simple. Fruit consisting of two carpella, separable from a common axis, to which they adhere by their face (the commissure); each carpellum traversed by elevated ridges, of which five are primary, and four, alternating with them, secondary;

the ridges are separated by channels, below which are often placed, in the substance of the testa, certain linear receptacles of coloured oily matter, called vittæ. Seed pendulous, usually adhering inseparably to the pericarpium, rarely loose; embryo minute, at the base of abundant horny albumen; radicle pointing to the hilum. Herbaceous plants, with fistular, furrowed stems. Leaves usually compound, sometimes simple, sheathing at the base. Flowers in umbels, white, pink, yellow, or blue, generally surrounded by an involucrum. (Lindley.)

DESCRIPTION, &c.—This is a very large order; but as it contains very few ornamental plants, I shall only describe those at length which I think are likely to have attracted the attention of my readers sufficiently to make them wish to know their names. All the plants belonging to this order are easily distinguished by their flowers being produced in umbels, their stalks being hollow and furrowed, and the leaves being generally compound and always sheathing at the base. All the Umbelliferous plants are in the Linnæan class and order Pentandria Digynia, from their five stamens and two styles. Most of the plants belonging to this order are poisonous in a wild state; but many of them are rendered wholesome by cultivation.

GENUS I.

THE CARROT. (DAUCUS, *Lin.*)*Lin. Syst. PENTANDRIA DIGYNIA.*

GENERIC CHARACTER.—Calyx five-toothed. Petals obovate, emarginate, inflexed; the outer often radiant and deeply bifid. Fruit compressed from the back. Carpella with the five primary ridges filiform and bristly, of which the three intermediate ones occupy the back, and the two lateral ones the plane of the commissure; the four secondary

ridges equal, more prominent, with the prickles in a single row. Channels under the secondary ridges with single vittæ. Seed flat in front. Involucrum universal and partial, many-leaved. Flowers white or pink. (*Lindley.*)

DESCRIPTION, &c.—There are only two species in this genus, both of which are biennials. The name of *Daucus* was applied by the ancients to this plant, but its derivation is not known.

1.—THE WILD CARROT. (DAUCUS CAROTA, *Lin.*)

SYNONYME.—Bird's Nest.

ENGRAVINGS.—Eng. Bot., t. 1174; 2nd ed., t. 423; and our *fig. 1*, in Pl. 38.

SPECIFIC CHARACTER.—Bristles of the fruit slender. Leaflets pinnatifid, with linear-lanceolate acute segments. Umbels with a solitary, coloured, abortive flower; when in fruit concave. (*Lindley.*)

DESCRIPTION, &c.—The Wild Carrot grows in great abundance on calcareous and chalky soils in every part of England; and though its flowers never expand fully, their great abundance and the massive heads formed by them, make the plant have a showy appearance. The part which we use as food has, in the wild Carrot, merely the appearance of a somewhat thickened root, and the change produced in it by cultivation is almost as great as that effected in the cultivation of the Cabbage.

THE SEA CARROT. (D. MARITIMUS, *Withering.*)

This is probably only a variety of the preceding species. The leaves are broader and more fleshy; the bristles on the fruit are flattened, and the umbels are somewhat more convex. It is only found on the sea-coast of the southern parts of England.

GENUS II.

THE BUR-PARSLEY. (CAUCALIS, *Lin.*)*Lin. Syst. PENTANDRIA DIGYNIA.*

GENERIC CHARACTER.—Calyx five-toothed. Petals obovate, emarginate, inflexed; the outer radiant and deeply bifid. Fruit laterally compressed. Carpella with the five primary ridges filiform, bristly, or with little prickles; of these the three middle are dorsal, the two lateral on the plane of the commissure; the four secondary ridges

more prominent, armed with prickles, in one or two rows. Channels under the secondary ridges with single vittæ. Seed involute, or inflexed at the edge. Involucrum both universal and partial, of many leaflets. Flowers white or pink. (*Lindley.*)

DESCRIPTION, &c.—There are only two species in this genus; both annuals. The botanic name is derived from two Greek words, signifying a stem lying on the ground.

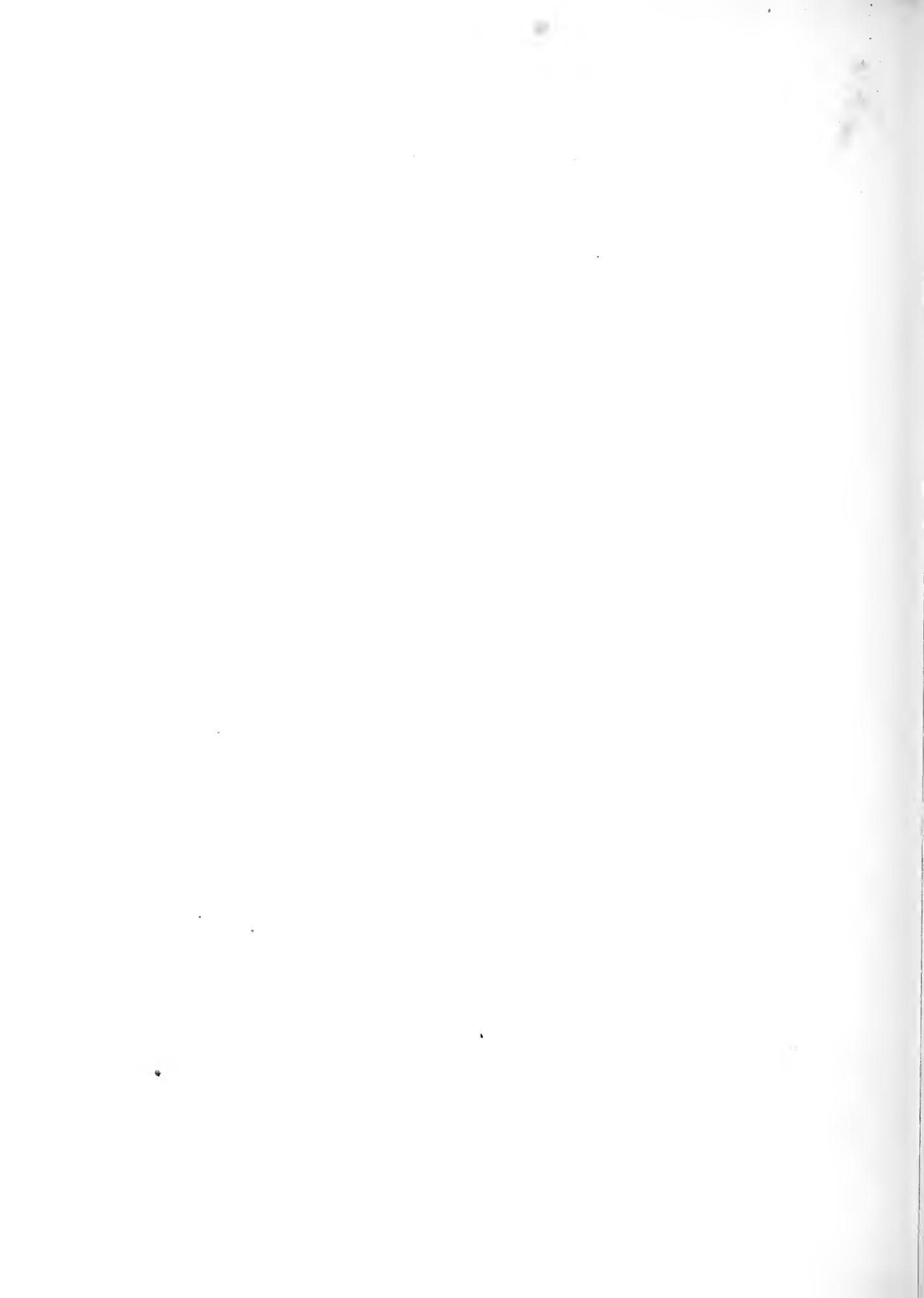
1.—THE GREAT BUR-PARSLEY. (CAUCALIS LATIFOLIA, *Smith.*)SYNONYME.—*Tordylium latifolium*, *Lin.*ENGRAVINGS.—Eng. Bot., t. 198; 2nd ed., t. 426; and our *fig. 2*, in Pl. 38.

SPECIFIC CHARACTER.—Umbels three-cleft, with membranous involucra; partial ones ripening about five fruits. Leaves pinnate, serrated. (*Lindley.*)

DESCRIPTION, &c.—This is the most beautiful of all the British Umbelliferæ, and its flowers are of a bright pink, a colour extremely rare among plants belonging to this order. It is only abundant in the dry fields in Cambridgeshire, where it makes a brilliant show during its flowering season, which is in the month of July.



1 Wild Carrot 2 Great Bur Parsley 3 Small Hart's-tongue 4 Sea Hops, Funnel or Sea
Sulphurwort 5 Sea Samphire 6 Spiglet, turner or Raddish money 7 Common Harebit or Hare's-ear 8 Hounds-tongue



THE SMALL BUR-PARSLEY. (C. DAUCOIDES, *Lin.*)

This is also only found in Cambridgeshire, and is a plant of no beauty, looking, at first sight, like a small abortive specimen of the Wild Carrot.

GENUS III.

THE HEDGE-PARSLEY. (TORILIS, *Adanson.*)

Lin. Syst. PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx five-toothed. Petals obovate, emarginate, inflexed; the outer larger than the others, and bifid. Fruit contracted at the side. Carpella with the five primary ridges bristly, plane of the commissure; the secondary ridges obliterated by the multitude of prickles which cover the channels. Channels under the contracted ; the outer radiant and bifid. Fruit globose. Carpella with the five primary ridges depressed, and wavy; the lateral ones in the prickle with single vittæ. Seed inflexed at the edge.—Involucrum of which the three middle are dorsal, and the two lateral ones in the variable ; the partial many-leaved. Flowers white or pink. (*Lindley.*)

DESCRIPTION, &c.—There are three species of this genus, all of which are annual weeds, possessing neither beauty nor utility. The name of *Torilis* is supposed to be from a Greek word, signifying to emboss ; in allusion to the appearance of the seed-vessel.

GENUS IV.

THE CORIANDER. (CORYANDRUM, *Lin.*)

Lin. Syst. PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx five-toothed. Petals obovate, emarginate, inflexed; the outer radiant and bifid. Fruit globose. Carpella with the five primary ridges depressed, and wavy; the lateral ones placed next an accessory margin ; the four secondary more prominent and carinate. Channels without vittæ; the commissure with two vittæ. Seed hollowed in front, covered by a loose membrane.—Universal involucrum wanting ; partial halved. Flowers white. (*Lindley.*)

DESCRIPTION, &c.—There is only one species in this genus, and it is generally supposed not to be a true native. It is an annual plant, producing an aromatic seed. The name of *Coriandrum* is from a Greek word, signifying a bug ; from the bruised foliage of the plant smelling like that very disagreeable insect.

GENUS V.

THE SMALL HART-WORT. (CONDYLOCARPUS, *Hoffmann.*)

Lin. Syst. PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx five-toothed. Petals obovate, emarginate, inflexed; the outer radiant and bifid. Fruit flattened at the back, surrounded by an accessory thick knotted margin. Carpella with very fine ridges ; the three dorsal equidistant, the two lateral contiguous to the thickened margin. Channels with three vittæ, each of which is separated by a furrow. Seed flat.—Involucrum both universal and partial, of many leaves. Flowers white. (*Lindley.*)

DESCRIPTION, &c.—This genus was formerly included in *Tordylium*, from which it has been separated on account of a slight difference in the seed-vessel. The name of *Condyllocarpus* signifies a jointed fruit.

1.—THE SMALL HART-WORT. (CONDYLOCARPUS OFFICINALIS, *Koch.*)

SYNONYME.—*Tordylium officinale*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 2440; 2nd ed., t. 421; and our fig. 3, in Pl. 38.

SPECIFIC CHARACTER.—Partial involucrum about as long as the flowers. Leaflets ovate, cut, crenate. Radiant petals in pairs, with very unequal lobes. (*Lindley.*)

DESCRIPTION, &c.—This is a very doubtful native. It is an ornamental plant when in flower ; but it is only found at Isleworth and some other places in the neighbourhood of London. It is an annual, and flowers in June and July.

GENUS VI.

THE GREAT HART-WORT. (TORDYLIUM, *Lin.*)*Lin. Syst.* PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx five-toothed. Petals obovate, emarginate, inflexed; the exterior radiant and bifid. Fruit compressed from the back, surrounded by an accessory thickened warty margin. Carpella with extremely obscure ridges; the three dorsal equidistant, the two

lateral contiguous to the thickened margin, or even covered over by it. Channels with single filiform vittæ. Seed flat.—Involucrum both universal and partial, of many leaves. Flowers white. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species in this genus, *T. maximum*, *Lin.* It is an annual, with insignificant flowers, which appear in June and July. The name of *Tordylium* is said to be derived from the Greek word for a turning-lathe, in allusion to the shape of the seed-vessels, which look as if they had been turned in a lathe.

GENUS VII.

THE PARSNEP. (PASTINACA, *Lin.*)*Lin. Syst.* PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx almost obsolete. Petals roundish, entire, involute, with a broad, inflexed, blunt middle segment. Fruit flattened at the back, surrounded by a dilated flat margin. Carpella with very fine ridges; the three dorsal equidistant, the two lateral con-

tiguous to the dilated margin. Channels with single vittæ. Seed flattened.—Involucrum neither universal nor partial, or with very few leaves. Flowers yellow. (*Lindley.*)

DESCRIPTION, &c.—There is only one species in this genus, viz. the common wild Parsnep (*P. sativa*, *Lin.*); and it is one of those plants which have been most wonderfully improved by cultivation, as the fusiform root of the wild Parsnep is not only slender, but it is tough and without any of that sweetness which so particularly distinguishes the cultivated Parsnep. The wild plant is a biennial, and it produces its yellow flowers in July. The name of *Pastinaca* is derived from *pastus*, food.

GENUS VIII.

THE COW-PARSNEP. (HERACLEUM, *Lin.*)*Lin. Syst.* PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx five-toothed. Petals obovate, emarginate, inflexed; the outer often radiant and bifid. Fruit flattened at the back, surrounded by a flat dilated margin. Carpella with very minute ridges; the three dorsal equidistant, the two lateral con-

tiguous to the dilated margin. Channels with single clavate vittæ. Seed flattened.—Universal involucrum deciduous; partial many-leaved. Flowers large, white. (*Lindley.*)

DESCRIPTION, &c.—The common Cow-Parsnep (*H. Sphondylium*, *Lin.*), though somewhat coarse-looking, is yet a stately plant, from its large upright stem, which often grows to the height of five or six feet, and its broad widely spreading leaves. It is very common in almost every part of England; generally growing in the hedges of fields, or by the road-side. It is a biennial, and produces its large white flowers in June and July. It takes its English name from the circumstance of cows being remarkably fond of it; and its botanic name, which is derived from Hercules, probably alludes to the strong and vigorous growth of the plant.

GENUS IX.

HOG'S FENNEL. (PEUCEDANUM, *Lin.*)*Lin. Syst.* PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx slightly five-toothed, sometimes obsolete. Petals obovate, emarginate, or nearly entire, contracted into an inflexed segment. Fruit flattened at the back, surrounded by a flat dilated margin. Carpella with equidistant ridges; the three

middle filiform, the two lateral more obsolete, contiguous to the dilated margin, or confounded with it. Seed flat in front. Channels with from one to three vittæ.—Universal involuerum various; partial many-leaved. Flowers small, yellow or white. (Lindley.)

DESCRIPTION, &c.—The plants belonging to this genus differ so much from each other, that I think it will be best to describe them separately. The name of *Peucedanum* signifies a dwarf Pine, and it is applied to this genus because one of the species has not only leaves like those of the Scotch Pine, but it sometimes produces a kind of resin greatly resembling that which exudes from the Pine tribe.

1.—THE SEA HOG'S FENNEL, OR SEA SULPHUR-WORT. (PEUCEDANUM OFFICINALE, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1767; 2nd ed., t. 416; and our fig. 4,

SPECIFIC CHARACTER.—Leaves five times deeply three-cleft; leaflets linear, undivided, flat. Bracteas linear, almost capillary. (Smith.)

ENGRAVINGS.—Eng. Bot., t. 38.

DESCRIPTION, &c.—This is a very curious plant; and it gives the genus both its English and its botanical name. The leaves are so finely divided as to resemble Fennel, as well as the leaves of the Pine tribe; and the root when wounded yields a resinous substance like turpentine. The whole plant smells strongly of brimstone; and it is only found in salt marshes near the sea in Sussex, Essex, and Kent. It is a perennial, and produces its flowers from July to September. It grows to the height of about three or four feet.

2.—THE GREAT MASTERWORT. (PEUCEDANUM OSTRUTHIUM, *Koch.*)

SYNONYME.—*Imperatoria Ostruthium*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 1380; 2nd ed., t. 418.

SPECIFIC CHARACTER.—Leaves twice ternate, undivided or three-lobed, rough-edged. Flower-stalks alternate. (Smith.)

DESCRIPTION, &c.—This plant is quite unlike the previous species; the leaflets being broadly ovate and the petioles of the leaves very much dilated, so as to form very broad and long sheaths to the stem. The root, which is tuberous and has an aromatic smell, was highly esteemed by the old herbalists as a remedy for almost every disorder; and hence it takes its English name of Masterwort. The whole plant was formerly cultivated in British gardens as a potherb, but it has long fallen into disuse.

3.—THE MILK PARSLEY. (PEUCEDANUM PALUSTRE, *Moench.*)

SYNONYMS.—*Thysselinum palustre*, *Tourn.*; *T. Plinii*, *Spreng.*; *Selinum palustre*, *Lin.*; Marsh Hog's Fennel.

triplly pinnate; leaflets pinnatifid, with elliptic-lanceolate segments. Rays of the umbel rough. Ridges of the fruit broad and obtuse. (Smith.)

ENGRAVINGS.—Eng. Bot., t. 229; 2nd ed., t. 417.

SPECIFIC CHARACTER.—Milky. Root generally single. Leaves

DESCRIPTION, &c.—This species is more abundant than either of the others; and it is a perennial, closely resembling the Parsley, but frequently growing to the height of three or four feet. It flowers in July; and if the flowers or leaves are gathered, a thick, acrid, milky juice issues from the wound, which has a very disagreeable smell, and which when dry resembles brown resin. The root is said to have been formerly used, when dry, as a substitute for ginger.

GENUS X.

THE GARDEN ANGELICA. (ARCHANGELICA, *Hoffmann.*)*Lin. Syst. PENTANDRIA DIGYNIA.*

GENERIC CHARACTER.—Calyx five-toothed. Petals elliptical, entire, acuminate, with the point curved inwards. Fruit somewhat compressed from the back, with two wings on each side. Carpella with thick carinate ridges; the three dorsal elevated, the two lateral dilated into a

wing twice as broad as the rest. Seed a loose kernel covered all over with numerous vittæ.—Universal involucrum scarcely any; partial halved, many-leaved. Flowers white. (*Lindley.*)

DESCRIPTION, &c.—The only species in this genus (*A. officinalis*, Hoffm.) is generally considered to be only a naturalised exotic. It is, however, now found wild in many parts of England, though never in any but very moist places. It is a biennial, and flowers from June till September. The species was formerly included in the genus *Angelica*, but it has been separated by modern botanists.

GENUS XI.

THE WILD ANGELICA. (ANGELICA, *Lin.*)*Lin. Syst. PENTANDRIA DIGYNIA.*

GENERIC CHARACTER.—Calyx an obsolete margin. Petals lanceolate, entire, acuminate, either incurved or not. Fruit compressed at the back, with two wings on each side. Carpella with three dorsal filiform raised ridges; the two lateral dilated into a wing twice as broad as the

rest. Channels with single vittæ. Seed rather taper.—Universal involucrum few-leaved or none; partial many-leaved. Flowers white. (*Lindley.*)

DESCRIPTION, &c.—This was the original genus of Linnæus, and it formerly included the Garden Angelica or Archangel; but it now consists of only one species (*A. sylvestris*, Lin.). This plant is much smaller and less aromatic than the Garden Angelica, but it is much more common, being found in marshy grounds in every part of England. It is a perennial, and flowers in July. The plant is named *Angelica* from its cordial and medicinal properties, which the ancients thought deserved the name of angelic.

GENUS XII.

THE SAMPHIRE. (CRITHMUM, *Lin.*)*Lin. Syst. PENTANDRIA DIGYNIA.*

GENERIC CHARACTER.—Calyx an obsolete margin. Petals roundish, entire, involute, with an obovate end. Fruit taper. Carpella with five raised, sharp, somewhat winged ridges, of which the lateral are rather larger than the rest, and form a margin. Seed half-taper,

forming a loose kernel, covered with numerous vittæ.—Universal and partial involucra many-leaved. Pericarpium spongy, cellular. Flowers greenish-white. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species in this genus. The name of *Crithmum* is derived from the Greek word for barley, from a fancied resemblance between the seed-vessel of this plant and a grain of barley.

1.—THE SEA SAMPHIRE. (CRITHMUM MARITIMUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 819; 2nd. ed., t. 413; and our *fig. 5*, in Pl. 38.

SPECIFIC CHARACTER.—Leaflets lanceolate, fleshy. Bracteas ovate. (*Smith.*)

DESCRIPTION, &c.—This plant grows on the sea-shore, beyond the reach of the waves, and in places where there does not appear to be enough earth to support any kind of plant, and where no human foot can tread.

It is on this account that the gathering of Samphire is such a dangerous trade, as the persons employed to collect it are obliged to suspend themselves from the rock above. When this is to be done, several persons repair to the cliffs with a rope often above one hundred feet long, which one of them fastens round his body; and, taking a basket and strong stick in his hands, he is let down by his companions, who place a piece of wood on the brink of the rock to prevent its edge cutting through the rope. Thus prepared, the samphire-gatherer descends, and steadyng himself with his stick, which he thrusts into the fissures of the rocks, he gathers the plants he wishes. When he has gathered all he can reach, he shouts to his companions, who draw him up. It is necessary to know this, to enter fully into the beauty of the well-known passage in "King Lear," when, speaking of Dover cliff, Shakespeare says—

"Half way down
Hangs one who gathers Samphire."

The French call this plant the *Herb of St. Peter*; and Samphire is evidently a corruption of the words *Saint Pierre*.

GENUS XIII.

THE LOVAGE. (LIGUSTICUM, *Lin.*)

Lin. Syst. PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx five-toothed or obsolete. Petals obovate, acutely emarginate, inflexed, with a very short unguis. Fruit winged, equal ridges; the lateral of which form a margin. Channels with many vittæ. Seed nearly half-taper.—Universal involucrum taper, or a little compressed at the sides. Carpella with five sharp, various; partial many-leaved. Flowers white. (*Lindley.*)

DESCRIPTION, &c.—There is only one species of this genus which is a native of Britain; the common Lovage of the gardens not being now included in it. The name of the genus appears of doubtful origin. The British species (*L. scoticum*) is a common plant on the sea-coast in Scotland, and in the north of England, where it has a pretty effect from the stalks and the veins of the leaves being red. Its root is fusiform and aromatic; but its leaves and stems are extremely acrid. It is a perennial, and flowers in July.

GENUS XIV.

THE SPIGNEL. (MEUM, *Tourn.*)

Lin. Syst. PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx an obsolete margin. Petals entire, elliptical, acute at each end. Fruit nearly taper. Carpella with five equal ridges, of which the lateral form the margin. Channels with many vittæ. Seed nearly half-taper.—Universal involucrum few-leaved or none; partial many-leaved. (*Lindl.*)

DESCRIPTION, &c.—There is only one species in this genus. The name of *Meum* is a Greek word, which it is supposed was first applied to the plant by Dioscorides.

1.—THE SPIGNEL, MEU, OR BALD-MONEY. (MEUM ATHAMANTICUM, *Jacq.*)

SYNONYMES.—*Athamanta Meum, Lin.*; *Æthusa Meum, Lin.*; *Ligusticum Meum, Crantz.*; *Kopr.*

ENGRAVINGS.—Eng. Bot., t. 2249; 2nd ed., t. 412; and our *fig.* 6, in Pl. 38.

SPECIFIC CHARACTER.—Leaflets all in numerous, deep, bristle-like segments. Involuera both general and partial. (*Lindley.*)

DESCRIPTION, &c.—This curious little plant, which possesses no beauty, but in its finely-cut leaves, is yet interesting, on account of two of the names that have been bestowed upon it. The best known of these, Bald-

money, alludes to the plant having been anciently dedicated to Balder, the Apollo of the North, in consequence of the seed bearing considerable resemblance to the lyre always carried by that god; and the name of Kopr, by which it is known in Poland and Polish Prussia, has given rise to the name of Copernicus, the celebrated astronomer, who was, in fact, a native of Thorn. The plant is abundant in dry, mountainous situations in England and Scotland, and throughout the north of Europe. It is a perennial, and flowers in June and July. The root, which is fusiform and as thick as a carrot, is very aromatic, and is frequently used in the Highlands of Scotland as a carminative.

GENUS XV.

THE PEPPER-SAXIFRAGE. (*SILAUS, Besser.*)

Lin. Syst. PENTANDRIA DIGYNIA.

DESCRIPTION, &c.—There is only one British plant in this genus. It is a perennial of no beauty, and disliked by cattle, who reject it apparently on account of its disagreeable smell. The name of *Silaus* is of doubtful origin, but it is supposed to have been applied by Pliny to this plant.

GENUS XVI.

THE FENNEL. (*FÆNICULUM, Hoffmann.*)

Lin. Syst. PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx obsolete. Petals roundish, entire, with a nearly square, retuse, involute segment. Fruit nearly taper. Carpella with five prominent, obtusely-keeled ridges, of which the lateral form a margin, and are rather broader than the others. Channels with one vitta. Seed nearly half-taper.—Involuera none. Flowers yellow. (*Lindley.*)

DESCRIPTION, &c.—There is only one species in this genus. The name of *Fæniculum* is derived from the Latin word *fenum*, hay; but there certainly seems very little resemblance between hay and fennel. The common Fennel (*F. vulgare*) was first classed with the Chamomile and afterwards with Meum. It is a biennial, very common on chalky cliffs, and it flowers in July and August.

GENUS XVII.

FOOL'S PARSLEY. (*ÆTHUSA, Lin.*)

Lin. Syst. PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx obsolete. Petals obovate, emarginate, inflexed. Fruit roundish-ovate. Carpella with five elevated, thick, acutely-keeled ridges, of which the lateral form a margin, and are rather wider than the others, surrounded by a somewhat winged keel. Channels with one vitta. Seed half globose.—Universal involuerum wanting; partial three-leaved, pendulous. Flowers white. (*Lindley.*)

DESCRIPTION, &c.—The common Fool's Parsley (*Æ. Cynapium*) is an annual weed, generally supposed to be poisonous, which bears considerable resemblance to parsley, but is distinguished by its wanting the peculiar smell of that plant. It is very abundant in every part of England. The name of *Æthusa* signifies to burn, and alludes to the acrid properties of the plant.

GENUS XVIII.

THE STONE-PARSLEY. (SESELI, Koch.)

Lin. Syst. PENTANDRIA DIGYNIA.

DESCRIPTION, &c.—The only British species of this genus has never been found but on the Gogmagog Hills near Cambridge. The meaning of the word *Seseli* seems doubtful.

GENUS XIX.

THE WATER-DROPWORT. (ŒNANTHE, Lin.)

Lin. Syst. PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx five-toothed. Petals obovate, emarginate, inflexed. Fruit nearly taper, crowned by the erect styles. Carpels with five rather convex, obtuse ridges, of which the lateral

form a margin, and are rather broader than the others. Channels with single vittæ. Seed taper, convex. Axis wanting.—Universal involucrum sometimes wanting; partial many-leaved. Flowers white. (Lindl.)

DESCRIPTION, &c.—The common Water-Dropwort (*Œ. fistulosa*) is a perennial plant, which is common in every ditch, and remarkable for its hollow stem, and for the tubular footstalks and midribs of its leaves. When the seed begins to form, the styles, which are rigid and persistent, become so much elongated as to make the seed-vessels look like burs. This plant is generally considered poisonous; but not so much so as the common Water-Hemlock (*Œ. crocata*), which is one of the most deadly of all the vegetable poisons, and which is particularly dangerous, as it closely resembles celery. The name of *Œnanthe* is derived from two Greek words, signifying a vine-flower; in allusion to the smell of the flowers, which resembles that of wine.

GENUS XX.

THE HARE'S-EAR. (BUPLEURUM, Lin.)

Lin. Syst. PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx an obsolete margin. Petals roundish, entire, closely involute, with a broad retuse segment. Fruit compressed at the side, crowned by the depressed disk. Carpella with five equal winged ridges, either sharp and filiform, or very slight and

obsolete; the lateral ones forming a margin. Channels with or without vittæ. Seed taper, convex, flattish in front.—Involucra various. Flowers greenish-yellow. Leaves entire. (Lindley.)

DESCRIPTION, &c.—This genus is somewhat remarkable, as containing the only ligneous plant in the order, though it is not a British species; and also because the species that are natives of this country are so extremely unlike Umbelliferous plants, as to render it difficult to suppose they can belong to the order. The leaves of all the species are simple, and without the slightest serrature, instead of being deeply cut into slender segments, as is general in plants belonging to this order. The name of *Bupleurum* is derived from two Greek words, signifying the rib of an ox; in allusion to the ribbed leaves of some of the species. The English name of Hare's-ear alludes to the shape of some of the leaves.

1.—THE COMMON HARE'S-EAR, OR THOROW-WAX. (BUPLEURUM ROTUNDIFOLIUM, Lin.)

ENGRAVINGS.—Eng. Bot. t. 99; 2nd ed., t. 400; and our *fig. 7*, in Pl. 38.

SPECIFIC CHARACTER.—Universal involucrum wanting. Leaves perfoliate. (Lindley.)

DESCRIPTION, &c.—This is an annual plant, growing in calcareous soils in many parts of England, but which is seldom found in very great abundance. The leaves are perfoliate, that is, the stem appears to grow

through them, and this is supposed to have given rise to the old English name of Thorow-wax ; wax being a Saxon word, signifying to grow. It is a curious-looking plant, with yellow flowers, which are produced in very small umbels, and appear in June and July. The whole of the plant is aromatic and slightly astringent.

THE NARROW-LEAVED HARE'S-EAR. (B. *ODONTITES*, *Lin.*)

A little, insignificant, annual plant, with very rigid, deeply-ribbed leaves, and minute, inconspicuous flowers, which has only been found on the rocks near Torquay.

THE FALCATE HARE'S-EAR. (B. *FALCATUM*, *Lin.*)

This very curious plant, though known and described by the old English herbalists, was, strangely enough, neglected by all the writers on British wild flowers till the year 1832, when it was figured and described in the *Supplement to Sowerby's English Botany*. It is only found in Essex, but it grows abundantly between Chelmsford and Ongar.

THE SLENDER HARE'S-EAR. (B. *TENUISSIMUM*, *Lin.*)

A little, insignificant annual, which is only found in the salt marshes of the eastern and southern coasts of England. The flowers, which are of a greenish-yellow, do not make their appearance till September, and, like the leaves, they have a most disagreeable smell and taste.

GENUS XXI.

THE EARTH-NUT. (CONOPODIUM, *Koch.*)

Lin. Syst. PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx an obsolete margin. Petals obovate, | with five equal, filiform, obtuse ridges, and many vittæ. Seed taper, emarginate, or nearly so, inflexed. Fruit contracted at the side, linear- | convex, flat in front.—Universal involucrum none ; partial with few oblong, crowned by a conical unedged disk and straight styles. Carpella | leaves. Flowers white. (*Lindley.*)

DESCRIPTION, &c.—There is only one species in this genus, which was formerly called *Bunium*, a word derived from the Greek, and signifying a little hill. This circumstance is worthy of being mentioned, as it is often useful to know where Earth-nuts are likely to be found, several instances being on record of persons, who have lost their way in a wood, having lived for several days on these tubers.

1.—THE COMMON EARTH-NUT. (CONOPODIUM FLEXUOSUM, *Koch.*)

SYNONYMES.—*Bunium flexuosum*, *Withering* ; B. *bulbocastanum*, *Curtis* ; Earth-Chestnut ; Kipper-or Pig-nut.

ENGRAVINGS.—Eng. Bot., t. 988 ; 2nd ed., t. 394.

SPECIFIC CHARACTER.—Root a little tuber the size of a nut. Stem slender, zigzag, with a very few leaves divided into capillary segments. Styles very conical and straight. (*Lindley.*)

DESCRIPTION, &c.—This is rather an ornamental little plant, from its light and elegant foliage, and its pure white flowers, which are large for those of an Umbelliferous plant. At the base of the stem is a tuber, which when roasted is very good to eat, and is considered very nourishing. Pigs are particularly fond of these tubers, and they may be often seen turning up the earth with their snouts to find them. The plant is a perennial, and it is seldom found except in gravelly soils.

GENUS XXII.

THE BURNET-SAXIFRAGE. (PIMPINELLA, *Lin.*)*Lin. Syst.* PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx an obsolete margin. Petals obovate, | ridges, of which the lateral form a margin. Channels with many vittæ. | emarginate, inflexed. Fruit contracted at the side, ovate, crowned | Seed convex, flattish in front.—Involucrum none. Flowers white. | by a convex disk and reflexed styles. Carpella with five, equal, filiform | (*Lindley.*)

DESCRIPTION, &c.—The plants belonging to this genus are remarkably aromatic, particularly the exotic species called *P. Anisum*, which is the aniseed of the shops. The British species are the Common Burnet-Saxifrage (*P. Saxifraga*), and the Great Burnet-Saxifrage (*P. magna*). Both these species are perennials, and are only found in chalky, or very dry gravelly soils. The flowers are white, or yellowish, and they appear in August. A decoction of the Great Burnet-Saxifrage is said to remove freckles from the skin, and it is sometimes used as a gargle.

GENUS XXIII.

THE WATER-PARSNEP. (SIUM, *Lin.*)*Lin. Syst.* PENTANDRIA DIGYNIA.

DESCRIPTION, &c.—This genus contains two species of aquatic plants, both highly poisonous in their nature, which are very common in ditches and similar situations in every part of England. The broad-leaved kind (*S. latifolium*) is a very tall handsome plant, with large umbels and white flowers; but *S. angustifolium* is a much smaller and a more elegant plant, with yellowish flowers. Both are perennials, with creeping roots, and their flowers appear in July and August. The name of *Sium* is derived from the Celtic word for water; in allusion to the aquatic habits of the plant.

GENUS XXIV.

THE MARSH-WORT. (HELOSCIADIUM, *Koch.*)*Lin. Syst.* PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx a five-toothed margin, occasionally | which the lateral form a margin. Channels with single vittæ. Seed | obsolete. Petals ovate, entire, acute, or bluntnish, with a point; the | more or less convex, flattish in front.—Involucra various. Flowers | point either straight or inflexed. Fruit compressed at the side, ovate, | white. (*Lindley.*)

DESCRIPTION, &c.—There are three species of this genus, which are all creeping-rooted, perennial, aquatic plants, with small clusters of white flowers. *Helosciadium* is derived from two Greek words, signifying an umbelliferous plant growing in a marsh.

GENUS XXV.

THE CARAWAY. (CARUM, *Lin.*)*Lin. Syst.* PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx an obsolete margin. Petals obovate, | margin; commissure flat. Channels with single vittæ. Seed taper, | emarginate, regular, inflexed. Fruit compressed at the sides, oblong. | convex, flattish in front. Involucra various. Flowers white. (*Lindley.*)

DESCRIPTION, &c.—Of the two species usually included in this genus, the best known, which is the common

Caraway-seed (*C. Carui*, Lin.), is a doubtful native. It is a biennial, and flowers in June. The other kind, *C. verticillatum*, very probably does not belong to the genus at all. It is a rare plant which only grows in salt marshes, and it differs very widely from the common Caraway-seed.

GENUS XXVI.

THE STONE-WORT. (SISON, *Lin.*)

Lin. Syst. PENTANDRIA DIGYNIA.

DESCRIPTION, &c.—This was once a very extensive genus, but it is now reduced to a single plant, of no beauty and very offensive smell. The name of *Sison* is derived from a Celtic word, signifying a running brook ; in reference to the habits of some of the plants which were formerly included in the genus.

GENUS XXVII.

THE PARSLEY. (PETROSELINUM, *Hoffm.*)

Lin. Syst. PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx an obsolete margin. Petals roundish, incurved, entire, scarcely emarginate, contracted into an inflexed lobe. Fruit ovate, contracted at the side, nearly double. Carpella with five, equal, filiform ridges, of which the lateral form a margin. Channels with single vittæ. Seed gibbous, convex, flattish in front. Universal involucrum few-leaved ; partial many-leaved. Flowers white. (*Lindley.*)

DESCRIPTION &c.—It is generally considered that there are two species in this genus, but the common Parsley (*P. sativum*) is certainly not a true native ; and the Corn Parsley (*P. segetum*) is an inconspicuous weed, with a circle of radical leaves growing close to the ground, and very small flowers. The name of *Petroselinum* is derived from the Greek word for a stone ; in allusion to the plant growing generally on stony or rocky places. Parsley was in great repute with the Greeks and Romans, who wore garlands of it at their banquets, under the idea that it increased their gaiety and gave an appetite. At Rome, in the Isthmian games, the conquerors were crowned with garlands of Parsley.

GENUS XXVIII.

THE CELERY. (APIUM, *Lin.*)

Lin. Syst. PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx an obsolete margin. Petals roundish, entire, with an involute point. Fruit roundish, contracted at the sides, double. Carpella with five, filiform, equal ridges, of which the lateral form a margin. Channels with single vittæ, except the outermost, which have sometimes two or three. Seed very convex, flattish in front.—Involucra none. Flowers white. (*Lindley.*)

DESCRIPTION, &c.—There is only one species in this genus, viz. the Wild Celery, or Smallage ; and it is impossible for any plant to show more decidedly the advantages of cultivation, as in a wild state it is acrid, and even poisonous ; while in a state of cultivation it becomes sweet, tender, and succulent. In its wild state it only grows in marshy places and ditches, generally near the sea. It is a biennial, and flowers in August and September.

GENUS XXIX.

THE WATER-HEMLOCK, OR COW-BANE. (CICUTA, *Lin.*)*Lin. Syst. PENTANDRIA DIGYNIA.*

DESCRIPTION, &c.—There is only one species in this genus, and it is one of the most fatal of all our vegetable poisons. It is a perennial plant, flowering in August, and growing in ditches, and other shallow wet places, where it is very conspicuous from the singular position of its umbels, which grow opposite to the leaves; and from the leaves themselves, which are twice ternate, with linear-lanceolate, deeply-serrated leaflets. When full-grown, its disagreeable smell and extremely acrid taste prevent it from being eaten; but early in spring, when its unpleasant qualities are not so perceptible, it is often eaten by cows, to whom it is almost always fatal. Should it be taken accidentally by a human being, the best remedy is to drink largely of olive oil. The name of *Cicuta* is derived from the appellation given by the Latins to the joints of the reeds, of which their pipes were made; and the stems of this plant are marked by similar articulations.

GENUS XXX.

THE GOUT-WEED. (ÆGOPODIUM, *Lin.*)*Lin. Syst. PENTANDRIA DIGYNIA.*

DESCRIPTION, &c.—The common Gout-weed, or Herb Gerard (Æ. *Podagraria*), is a very troublesome weed, which spreads so rapidly by its creeping roots, that when it once takes possession of a garden it is scarcely possible to get quite clear of it. The root is pungent and aromatic, and was formerly used to form a poultice for the gout, which it was said to cure, and hence its popular English name. It is a perennial, flowering in May and June. The name of *Ægopodium* signifies a goat's foot; in allusion to the leaves being cleft somewhat like the foot of that animal.

GENUS XXXI.

THE HONEWORT. (TRINIA, *Hoffm.*)*Lin. Syst. PENTANDRIA DIGYNIA.*

DESCRIPTION, &c.—This is the only Umbelliferous plant which has the male and female flowers separate. It is of no particular beauty, and is rather rare, having been only found on the limestone rocks near Bristol, and at other places in Somersetshire. It is a perennial, and it flowers in May and June. The name of *Trinia* was given to this plant in honour of Dr. Trinius, a Russian botanist.

GENUS XXXII.

THE BEAKED-PARSLEY. (ANTHRISCUS, *Spreng.*)*Lin. Syst. PENTANDRIA DIGYNIA.*

DESCRIPTION, &c.—There are three species in this genus, viz. the Wild Chervil (*A. sylvestris*), a large, handsome, perennial plant, flowering in April and May; the Garden Chervil (*A. Cerefolium*), a delicate annual

plant, with very slender stems and greenish flowers, which it produces in June; and the common Beaked Parsley (*A. vulgaris*), which is a very handsome annual, with trebly pinnate leaves, which are extremely beautiful. The name of *Anthriscus* was given to this genus by Pliny, but its derivation is unknown.

GENUS XXXIII.

THE SHEPHERD'S-NEEDLE. (SCANDIX, *Lin.*)

Lin. Syst. PENTANDRIA DIGYNIA.

DESCRIPTION, &c.—There is only one British species in this genus, viz. the common Shepherd's-needle, or Venus's Comb (*S. Pecten-Veneris*), which is a little annual weed, with white flowers. It takes its somewhat singular English names from the long sharp beaks of its seed-vessels, and from their being arranged in a row, so as to look something like a comb with very long teeth. The word *Scandix* signifies to prick; in allusion also to the sharp points of the seed-vessels. The flowers are inconspicuous, but they continue nearly all the summer.

GENUS XXXIV.

THE ROUGH CHERVIL. (CHÆROPHYLLUM, *Lin.*)

Lin. Syst. PENTANDRIA DIGYNIA.

DESCRIPTION, &c.—There are three species in this genus, all of which are rather handsome plants. The common Rough Chervil (*C. temulentum*) is very abundant in every part of England, but it is always found growing in the shade. It is an annual, with inconspicuous flowers, which it produces in June and July; and it is easily distinguished from most other Umbelliferous plants, by its umbels drooping before the expansion of the flowers. The plant has a sweet aromatic taste if eaten, but it is considered deleterious, if not poisonous. The second species, the Golden Chervil (*C. aureum*), and the broad-leaved Chervil (*C. aromaticum*), are both aromatic perennials, which have been naturalised in Scotland, but are not true natives. *Chærophillum* is derived from two Greek words, signifying to rejoice in a leaf; in allusion to the leaves of some of the species having a very agreeable and aromatic smell.

GENUS XXXV.

THE CICELY. (MYRRHIS, *Scopoli.*)

Lin. Syst. PENTANDRIA DIGYNIA.

DESCRIPTION, &c.—There is only one British species in this genus, viz. the Sweet Cicely (*M. odorata*), which is a very elegant and highly aromatic perennial. It is found in great abundance in the mountainous parts of England and Wales, and in Scotland. It flowers in May and June. The name of *Myrrhis* is derived from *Myrrh*, because the plant is supposed to smell like the fragrant balsam of that name.

GENUS XXXVI.

THE BLADDER-SEED. (PHYSOSPERMUM, *Cusson.*)*Lin. Syst.* PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx a five-toothed margin. Petals obovate, somewhat emarginate, inflexed. Fruit contracted at the side, double. Carpella roundish, uniform, with five fine equal ridges, of which the lateral are placed within the margin. Channels with single vittæ. Seed involute, lunate.—Universal and partial involucra many-leaved. Flowers white. (*Lindley.*)

DESCRIPTION, &c.—The Cornish Bladder-seed (*P. cornubiense*) is a very singular plant, which has only been found in the fields near Bodmin, in Cornwall, and which is the sole representative of the genus. The seed lies loose in the cavity of the carpellum, and hence the plant has received both its English and its generic name; the latter being derived from two Greek words which signify bladder-seed.

GENUS XXXVII.

THE PRICKLY SAMPHIRE. (ECHINOPHORA, *Lin.*)*Lin. Syst.* PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx a five-toothed margin. Petals obovate, emarginate, inflexed, or the external larger than the rest and bifid. Flowers of the ray male with long stalks, of the centre a solitary female. Fruit ovate, nearly taper, included in a hollow receptacle, with a short projecting beak. Carpella with five, equal, depressed, wavy, streaked ridges. Channels with single vittæ, which are covered by an arachnoid membrane.—Involucra both of many leaves. (*Lindl.*)

DESCRIPTION, &c.—There is only one species in this genus, and that is a doubtful native. It is a perennial plant, growing on the sea-coast, and flowering in July. The roots taste like parsnips; but the stem is so bushy, and so beset with spiny leaves, that it is difficult to approach the plant. *Echinophora* is derived from two Greek words, signifying to bear a hedgehog; in allusion to the spiny leaves of the plant.

GENUS XXXVIII.

THE ALEXANDERS. (SMYRNIUM, *Lin.*)*Lin. Syst.* PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx an obsolete margin. Petals lanceolate, or elliptical, entire, with a long inflexed point. Fruit contracted at the sides, double. Carpella roundish, reniform, with the three dorsal ridges prominent and sharp; the two lateral forming an obscure margin. Channels with many vittæ. Seed involute.—Involucra various. (*Lindley.*)

DESCRIPTION, &c.—There is only one species in this genus which is a native of Britain, and it was formerly used as a potherb. *Smyrnium* is derived from *Myrrh*, in allusion to the smell of the bruised leaves.

1.—THE COMMON ALEXANDERS. (SMYRNIUM OLUSATRUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 230; 2nd ed., t. 440; and our *fig.* 8, in Pl. 38. SPECIFIC CHARACTER.—Stem-leaves ternate, stalked, serrated. (*Smith.*)

DESCRIPTION, &c.—This is a biennial plant, growing vigorously in many parts of the kingdom, and flowering in May and June. The whole plant is greenish; but the flowers and flower-leaves have a warm yellowish tint, which harmonises very well with the deep green of the lower part of the plant, and gives a shaded

effect to the whole. It was formerly cultivated in gardens, both as a salad plant and a potherb, and it has a very agreeable though pungent flavour. The name of Alexanders is said to be a corruption of the specific name of this plant, *Olusatrum*, which signifies literally the black potherb; in allusion to the dark and almost black hue of the ripe seed-vessel.

GENUS XXXIX.

THE HEMLOCK. (CONIUM, *Lin.*)

Lin. Syst. PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx an obsolete margin. Petals obovate, emarginate, inflexed. Fruit compressed at the side, ovate. Carpella with five, prominent, wavy, crenated, equal ridges, of which the lateral

form a margin. Channels with many streaks, but no vittæ. Seed with a deep narrow incision in the face. Universal involucrum few-leaved; partial three-leaved, halved. (*Lindley.*)

DESCRIPTION, &c.—This genus, though rather an extensive one, contains only one British plant. The name of *Conium* is said to be derived from a Greek word, signifying a top; in allusion to the effects produced by the poisonous juice of the plant, which produces giddiness, and makes the person who has taken it stagger, just as a top does when it has almost ceased spinning. The name is said to have been applied to the plant by Theophrastus; so that if the derivation be correct, the ancient Greeks appear to have been as well acquainted with spinning-tops as school-boys of the present day.

1.—THE COMMON, OR SPOTTED HEMLOCK. (CONIUM MACULATUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1191; 2nd ed., t. 438.

SPECIFIC CHARACTER.—Stem polished and spotted, much branched. (*Smith.*)

DESCRIPTION, &c.—The common Hemlock grows abundantly in many parts of England, particularly on the waste ground near hedges; and it is easily distinguished from the other Umbelliferous plants by its shining and spotted stem. It is highly poisonous; but it is not so likely to be taken by mistake as most of the other poisonous British plants, on account of the very disagreeable smell of its bruised leaves. It was well known to the ancients, and is said to be the poison taken by Socrates. The plant is a biennial, and it flowers in June and July.

GENUS XL.

THE ERYNGO. (ERYNGIUM, *Lin.*)

Lin. Syst. PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx a five-toothed leafy margin. Petals erect, converging, oblong-obovate, emarginate, with an abruptly in-curved segment the length of the petal. Fruit nearly taper, obovate.

Carpella covered with scales, with neither ridges nor vittæ. Seed about half-taper.—Umbels simple. Involucrum many-leaved. Flowers usually blue. Leaves simple. (*Lindley.*)

DESCRIPTION, &c.—There are two species of this genus, viz. the Sea Holly (*E. maritimum*), and the Field Eryngo (*E. campestre*). The first is abundant on the sea-shore in many parts of England, growing in the loose sand, which it binds with its long spreading roots. The leaves are covered with a kind of white substance, which looks as though it were salt deposited by the sea. The whole herb is pleasant to eat, having a sweet and aromatic taste; and the shoots and roots are very good bleached and candied. The Field Eryngo is somewhat rare, having

been only found in three places, viz. at Daventry, Plymouth, and Newcastle-upon-Tyne. It is a smaller plant than the Sea Holly, and has neither the blue flowers nor glaucous hue of that plant. Both the species are perennials.

GENUS XLI.

THE SANICLE. (*SANICULA, Lin.*)

Lin. Syst. PENTANDRIA DIGYNIA.

DESCRIPTION, &c.—There is only one British species in this genus, viz. the Wood Sanicle (*S. europaea*). It is very abundant in woods, where its pretty white flowers and dark green glossy foliage make it very conspicuous among the heaps of dead leaves by which it is generally surrounded. The word *Sanicula* is derived from *sano*, to heal ; in allusion to the supposed medical properties of the herb, which, Gerard informs us, was formerly used in all “vulnerary potions or wound-drinks, which make whole and sound all inward wounds and outward hurts.” The plant is a perennial, and it flowers in May and June.

GENUS XLII.

THE WHITE-ROT. (*HYDROCOTYLE, Lin.*)

Lin. Syst. PENTANDRIA DIGYNIA.

DESCRIPTION, &c.—The only British plant belonging to this genus grows in marshy situations ; and as the sheep fed in such places are very subject to the rot, the plant is supposed by many ignorant people to produce that most fearful disease, and hence its popular English name. It is also called Marsh Pennywort ; in allusion to the shape of its leaves, which is round like that of a penny. The scientific name of the plant, *Hydrocotyle*, also alludes to the shape of the leaves, as it signifies a water-cup ; and the leaves, from having their stalk in the centre, frequently take a cup-like shape, and are found with a little water in the centre. The plant is a creeping perennial, and produces its pretty pinkish flowers in May and June.

CHAPTER XL.

THE MADDER FAMILY. (*STELLATÆ, Ray.*)

CHARACTER OF THE ORDER.—Calyx superior, four, five, or six-lobed. Corolla monopetalous, rotate or tubular, regular, inserted into the calyx ; the number of its divisions equal to those of the calyx. Stamens equal in number to the lobes of the corolla, and alternate with them. Ovarium simple, two-celled ; ovules solitary, erect ; style simple ; stigmata two. Fruit a dry indehiscent pericarpium, with two cells, and two seeds. Seeds erect, solitary ; embryo straight in the axis of horny albumen ; radicle inferior ; cotyledons leafy. Herbaceous plants, with whorled leaves, destitute of stipulæ ; square stems ; roots staining red ; flowers minute. (*Lindley.*)

DESCRIPTION, &c.—This order was formerly generally considered a section of Rubiaceæ, a very extensive order, containing the Coffee, the Peruvian Bark, and many other interesting plants. All the British plants, however, contained in Rubiaceæ, are comprised in the present order, *Stellatæ* ; and they are all herbaceous

plants with square stems, and their leaves in whorls or stars, whence the order takes its name, *stella* signifying a star. The four British genera contained in this order belong to the Linnæan class and order Tetrandria Monogynia, on account of their four stamens and their single style.

GENUS I.

THE BED-STRAW. (GALIUM, *Lin.*)

Lin. Syst. TETRANDRIA MONOGYNIA.

GENERIC CHARACTER.—Corolla rotate, or campanulate, five-cleft. Fruit dry, not crowned by the calyx. (*Lindley.*)

DESCRIPTION, &c.—All the kinds of *Galium* bear considerable resemblance to each other, and most of them are very slender weeds, with small but pretty flowers. The roots of most of them afford an excellent red dye. The name of *Galium* is derived from the Greek word for milk; and it was applied to this genus because *G. verum* was formerly used for coagulating milk. These plants are also called Bed-straw, from their fragrance; as in ancient times, when beds were made of straw, it was the custom to strew them with fragrant herbs.

* *Fruit Smooth.*

1.—THE MUG-WEED. (GALIUM CRUCIATUM, *Lin.*)

SYNONYME.—Crosswort.

ENGRAVINGS.—*Eug. Bot.*, t. 143; 2nd ed., t. 203; and our *fig.* 1, in Pl. 39.

SPECIFIC CHARACTER.—Leaves ovate, hoary, four in a whorl. Stem hairy, simple above. Flower-stalks axillary, corymbose, with two leaves. (*Smith.*)

DESCRIPTION, &c.—This plant is extremely common in every part of England. The root is perennial and creeping; the flower is yellow and rather pretty; the leaves are in whorls of four each, and the stem is decidedly square. The flowers appear in May.

2.—THE WHITE WATER BED-STRAW. (GALIUM PALUSTRE, *Lin.*)

ENGRAVINGS.—*Eng. Bot.*, t. 1857; 2nd ed., t. 205; and our *fig.* 2, in Pl. 39.

in a whorl, unequal in size. Stem weak; branched in the upper part. (*Smith.*)

SPECIFIC CHARACTER.—Leaves obovate, obtuse; the upper ones four

DESCRIPTION, &c.—This species is very common in ditches, and it is generally found growing near some reed, or other tall plant, against which it leans for support. Its flowers are small, and they appear in July and August. The plant is a perennial, with a somewhat creeping root.

3.—THE YELLOW BED-STRAW. (GALIUM VERUM, *Lin.*)

ENGRAVINGS.—*Eng. Bot.*, t. 660; 2nd ed., t. 204; and our *fig.* 3, in Pl. 39.

SPECIFIC CHARACTER.—Leaves eight in a whorl, linear, channelled, entire, rough. Flowers in dense panicles. Fruit smooth. (*Smith.*)

DESCRIPTION, &c.—This is the most ornamental of all the species; and as it has a strong honey-like smell, it was the kind generally used for strewing on beds, and was called pre-eminently Ladies' Bed-straw. The whole plant was also much used in the time of Elizabeth and her immediate successors instead of rennet, to coagulate milk; and it is said that Cheshire cheese was then always made with it. In later times the plant was



1 Hug-weed. 2 White Water Bed-straw. 3 Yellow Bed-straw. 4 Hedge Bed-straw.
or Whipsongue. 5 Squinancy wort. 6 Wild. Hadder



cultivated for the sake of its root, which was used for dyeing both red and yellow. Ray adds, that the flowers were often distilled, and that they furnished a very agreeable liqueur. The plant is a perennial, and it flowers in July and August.

4.—THE HEDGE BED-STRAW, OR WHIP-TONGUE. (*GALIUM MOLLUGO, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1673; 2nd ed., t. 214; and our *fig. 4*, in Pl. 39. | bristle-pointed, rough-edged. Flowers in loose spreading panicles.

Corolla thick-tipped. Fruit smooth, globular. (*Smith.*)

SPECIFIC CHARACTER.—Leaves eight in a whorl, elliptical, bluntish,

DESCRIPTION, &c.—This plant, which is often called the Great Hedge Bed-straw, well deserves that name, because it frequently grows to the height of three or four feet; while some of the other species of the genus do not exceed as many inches. The flowers also of *G. Mollugo* are longer and more conspicuous than those of most of the other species, and they are produced in great abundance. The leaves are in whorls of eight each, and they are bordered with fine hooked bristles, which, when the leaf is put into the mouth, produce such an unpleasant effect on the palate as to give rise to the popular English name of Whip-tongue. The plant is common in every part of England, and it spreads rapidly on account of its creeping root. It is a perennial, and flowers in July and August.

There are numerous other species of *Galium* in this division, all of which have very small flowers and slightly rough leaves. They are, however, so small and insignificant, that it does not appear necessary to describe them in detail.

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\* \* *Fruit bristly.*

GOOSE-GRASS, OR CLEAVERS. (*G. APARINE, Lin.*)

This is one of the best-known of all the English weeds, as it is scarcely possible to gather wild flowers in a hedge without having the clothes covered with either the leaves or fruit of this species. Dogs, particularly if they have long hair, are often seen carrying away the seed-vessels upon their backs. The plant is an annual, and it flowers all the summer.

THE CROSS-LEAVED BED-STRAW. (*G. BOREALE, Lin.*)

This is a very pretty little plant; easily distinguished by its leaves, which are much longer than those of most of the other species, and, being only four in a whorl, form a decided cross. The species is only found in the mountainous parts of the north of England and Scotland; and it produces its masses of milk-white flowers in July. The roots, which are long and slender, often appear above the surface of the ground; and, as they are deeply tinged with red, they have not only a singular appearance, but they are said to communicate their colour to the wool of the sheep that feed on them.

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GENUS II.

THE WOODRUFF. (*ASPERULA, Lin.*)

Lin. Syst. TETRANDRIA MONOGYNIA.

GENERIC CHARACTER.—Corolla funnel-shaped, with three or four segments. Fruit dry, not crowned by the calyx. (*Lindley.*)

DESCRIPTION, &c.—The plants belonging to this genus are well-known for their fragrance. The name of *Asperula* alludes to the roughness of the leaves of some of the species.

1.—THE SWEET WOODRUFF. (*ASPERULA ODORATA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 755; 2nd ed., t. 201.

SPECIFIC CHARACTER.—Leaves eight in a whorl, lanceolate. Panicles stalked, of few flowers. (*Smith.*)

DESCRIPTION, &c.—This plant is common in every part of England, and it is well known for its fragrance; as, though it is quite destitute of smell when gathered, its sweetness increases as it dries, and remains permanent for a long time, and on this account it is frequently put into drawers to give an agreeable smell to linen. It is a perennial, and its flowers are produced in May. The name of Woodruff alludes to the leaves of this species, the whorls of which are so placed as to look like a series of little ruffs down the stem.

2.—THE SQUINANCY-WORT. (*ASPERULA CYNANCHICA*, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 33; 2nd ed., t. 202; and our *fig. 5*, in Pl. 39. | SPECIFIC CHARACTER.—Leaves linear, four in a whorl; the upper ones very unequal. Flowers all four-cleft. Fruit smooth. (*Smith.*)

DESCRIPTION, &c.—This species was formerly in great repute for the cure of quinsey sore throats; and this is supposed to have given rise to its somewhat singular English name. It is a perennial, and flowers during the whole of the summer. This plant will only grow on dry chalky banks, fully exposed to the sun; and yet it is always found almost hidden by the grass and other plants which grow around it, without the shelter of which it could not live.

GENUS III.

THE SHERARDIA. (*SHERARDIA*, *Lin.*)*Lin. Syst. TETRANDRIA MONOGYNIA.*GENERIC CHARACTER.—Corolla funnel-shaped, four-cleft. Fruit dry, crowned with the persistent teeth of the calyx. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species of this genus, the popular name of which is the Little Field Madder. It is a small annual plant, with blue flowers; and it is very common on the waste ground of corn fields, and even among the corn. It is most abundant in light, sandy, or gravelly soils, and in such situations it continues flowering nearly all the summer. There is very little botanical difference between this genus and *Asperula*; the only distinction being, that in *Sherardia* the calyx remains on the ripe seed-vessel, to which it forms a kind of crown. The genus is named in honour of Dr. Sherard, who was a friend of Linnæus, and who had a celebrated garden at Eltham in Kent.

GENUS IV.

THE MADDER. (*RUBIA*, *Lin.*)*Lin. Syst. TETRANDRIA MONOGYNIA.*GENERIC CHARACTER.—Corolla campanulate, spreading, four or five-lobed. Stamens four or five. Fruit succulent, double, smooth. (*Lindl.*)

DESCRIPTION, &c.—This is an extensive genus; but only one species is a native of Great Britain. The word *Rubia* is derived from *ruber*, red; in allusion to the dye extracted from the roots of some of the exotic species.

1.—THE WILD MADDER. (*RUBIA PEREGRINA, Lin.*)ENGRAVINGS.—Eng. Bot., t. 851; 2nd ed., t. 218; and our *fig. 6*, in Pl. 39.SPECIFIC CHARACTER.—Leaves four, or more, in a whorl, elliptical, shining and smooth on the upper side. Flowers five-cleft. (*Smith.*)

DESCRIPTION, &c.—This is an evergreen plant which grows among bushes in rich loamy soil on the Downs at Clifton, near Bristol, and in Devonshire and various other places in the south-west of England. It is a perennial plant, flowering in July, and ripening its fruit late in autumn. This species is frequently used in dyeing red, and also in making the colour called lake; but it is considered very inferior to the True Madder, or Turkish Red (*R. tinctoria*).

CHAPTER XLI.

THE HONEYSUCKLE FAMILY. (*CAPRIFOLIACEÆ, Juss.*)

CHARACTER OF THE ORDER.—Calyx superior, usually with two or more bractæ at its base; entire or lobed. Corolla superior, monopetalous or polypetalous, rotatæ or tubular, regular or irregular. Stamens equal in number to the lobes of the corolla, and alternate with them. Ovarium with from one to five cells, one of which is often monospermous, the others polyspermous; in the former the ovulum is pendulous; style one; stigmas one or three. Fruit indehiscent; one or

more celled, either dry, fleshy, or succulent, crowned by the persistent lobes of the calyx. Seeds either solitary and pendulous, or numerous and attached to the axis; testa often bony; embryo straight, at the base of the fleshy albumen; radicle superior. Shrubs or herbaceous plants; with opposite leaves, destitute of stipule. Flowers usually corymbose and often sweet-scented. (*Lindley.*)

DESCRIPTION, &c.—Dr. Lindley makes the order Caprifoliaceæ consist of two sections; in the first of which are included all the British genera generally comprised in the order; and in the second he places *Cornus*, the Dog-wood, which is usually in an order by itself, and *Hedera*, the Ivy, which was formerly included in Araliaceæ.

§ 1.—*Lonicerae*, Lindley. *Corolla monopetalous.*

GENUS I.

THE HONEYSUCKLE. (*CAPRIFOLIUM, Tourn.*)*Lin. Syst. PENTANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx 5-toothed, persistent. Corolla tubular, 2-lipped, usually saccate at the base. Stamens 5. Ovarium 3-celled, with the cells equally many-seeded. Berry 1-celled, 1-seeded. Twining shrubs, with simple leaves, and capitate fragrant flowers. (*Lindley.*)

DESCRIPTION, &c.—The genus *Caprifolium* contains the two species that are generally known by the name of Honeysuckle; that is, those which are twining shrubs, and have their flowers in heads. The name of *Caprifolium* signifies goat's leaf, in allusion to the fondness which goats were supposed to have for the plant; or, according to other authors, from the habit of the plant in climbing upwards, as goats do, into almost inaccessible places. It is placed in the Linnæan class and order Pentandria Monogynia, from its five stamens and its single style.

1.—THE PALE PERFORATE HONEYSUCKLE. (*CAPRIFOLIUM PERFORIATUM, Lindl.*)SYNONYMES.—*Lonicera Caprifolium, Lin.*; the Garden Honeysuckle.ENGRAVINGS.—Eng. Bot., t. 799; 2nd ed., t. 324; and our *fig. 1*, in Pl. 40.

SPECIFIC CHARACTER.—Flowers ringent, whorled, terminal. Leaves

deciduous; the uppermost confluent and perforate. (*Smith.*)

DESCRIPTION, &c.—This beautiful plant is but a doubtful native, and, as it is very common in gardens, where it seeds abundantly, it is most probable that those plants which are found wild have sprung from garden

seeds, carried by birds, or thrown out in some other manner. This species is easily distinguished from the common kind by its leaves, which appear as if entire, or rather, as if two grew together with the stem passing through them.

2.—THE COMMON HONEYSUCKLE, OR WOODBINE. (*CAPRIFOLIUM PERICLYMENUM*, *Lindl.*)

SYNONYME.—*Lonicera Periclymenum*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 800; 2nd ed., t. 325; and our *fig. 2*, in Pl. 40.

SPECIFIC CHARACTER.—Heads of flowers ovate, imbricated, terminal.

Leaves all separate, deciduous. Flowers ringent. (*Smith.*)

DESCRIPTION, &c.—The common Honeysuckle, or Woodbine, is one of the most beautiful and the most fragrant of the British plants. It is abundant in every part of England and Scotland; but I think it grows with most luxuriance in the north; at least, the finest Woodbines I ever saw were some in the woods at Walton Hall, near Wakefield. The Woodbine always grows from the east to the west, and if disentangled from the shoot it is twined round it will not embrace another, but droops and dies. It has often been doubted whether the Woodbine injures the trees it twists itself round; but the fact was proved by a tree in our garden at Bayswater, which, having had Woodbine planted at its base while quite young, became twisted in a most singular manner, and looked, when the Honeysuckle was removed, like a gigantic cork-screw. Cowper, who may be pre-eminently styled the Poet of Nature, from the closeness of his observation of natural objects, alludes to this peculiarity in the following lines:—

“ As woodbine weds the plant within her reach,
Rough elm, or smooth-grain’d ash, or glossy beech,
In spiral rings ascends the trunk, and lays
Her golden tassels on the leafy sprays;
But does a mischief while she lends a grace,
Straitening its growth by such a strict embrace.”

In ordinary cases, however, the tree which serves as a support to the Honeysuckle is too old to be injured so deeply, and the mischief can only be done when the Honeysuckle, and the tree which serves as its support, are of nearly the same age and grow up together. Numerous other poets have alluded to the Honeysuckle, and among others may be mentioned the beautiful lines of Shakespeare:—

“ So doth the woodbine, the sweet honeysuckle,
Gently entwist the maple.”

Sowerby supposes that the beautiful Oak-leaved Honeysuckle of the gardens is only a variety of the common Woodbine.

GENUS II.

THE UPRIGHT HONEYSUCKLE. (*LONICERA*, *Lin.*)

Lin. Syst. PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-toothed, deciduous. Corolla funnel-shaped, saccate at the base, with an erect two-lipped limb. Stamens five. Ovarium three-celled, with the cells equally many-seeded. Berry two-celled, two-seeded. Upright deciduous shrubs, with simple leaves, and twin inodorous flowers. (*Lindley.*)

DESCRIPTION, &c.—The genus *Caprifolium* was combined by Linnæus with *Lonicera*, but it has been separated by modern botanists; as, though the botanical distinctions are very trifling, the natural ones are very decided. All the *Loniceras* are, indeed, stiff upright shrubs, with small scentless flowers, which grow only two



1. Pale Perfoliate Honeysuckle. 2. Common Honeysuckle 3. Fly Honeysuckle.
4. The Pinnae

together, instead of being in whorls, as in the Woodbine. The name of *Lonicera* is given to the genus in honour of Lonicer, a German botanist, who lived about three hundred years ago. This genus is in the same Linnæan class and order as *Caprifolium*.

1.—THE COMMON UPRIGHT, OR FLY HONEYSUCKLE. (*LONICERA XYLOSTEUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 916; 2nd ed., t. 326; and our *fig. 3*, in Pl. 40. | SPECIFIC CHARACTER.—Stalks two-flowered. Berries distinct. Leaves entire, downy. (*Smith.*)

DESCRIPTION, &c.—This plant is a very doubtful native, as it has only been found in two places; both in the county of Northumberland. The flowers are by no means ornamental; but the wood is remarkably hard, and makes excellent walking-sticks. It is also used for making the teeth of hay-rakes, and for other similar purposes. The species is a shrub, and flowers in July. The specific name of this plant signifies bony-wooded; in allusion to the hardness of the wood.

GENUS III.

THE LINNÆA. (*LINNÆA, Gronovius.*)

Lin. Syst. DIDYNAMIA ANGIOSPERMIA.

GENERIC CHARACTER.—Calyx five-cleft, with two connate bractæ at the base. Corolla campanulate, five-lobed. Stamens five, of which two are shorter than the others. Ovarium three-celled; two of the cells many-seeded, 1 one-seeded. Fruit dry, three-celled, with one cell fertile. A creeping plant, with cernuous twin pink flowers. (*Lindley.*)

DESCRIPTION, &c.—There is only one species in this genus: a little insignificant plant; selected by Linnæus to bear his name, because he considered this “little northern plant, long overlooked, depressed, abject, and flowering early,” as a type of his own career. The genus is placed in the Linnæan class *Didynamia*, because two of the stamens are shorter than the others; and in the order *Angiospermia*, from the seeds being inclosed in a seed-vessel.

1.—THE LINNÆA. (*LINNÆA BOREALIS, Gronovius.*)

ENGRAVINGS.—Eng. Bot., t. 433; 2nd ed., t. 884; and our *fig. 4*, in Pl. 40.

DESCRIPTION, &c.—No specific character is given to this plant, as it is the only one of its genus that has been discovered. It is rare in England, but very common in Scotland, particularly in the pine and fir-woods, where the soil is dry and strong. It is a creeping suffruticose plant, and its pretty pinkish flowers are produced in May and June.

GENUS IV.

THE VIBURNUM. (*VIBURNUM, Lin.*)

Lin. Syst. PENTANDRIA TRIGYNIA.

GENERIC CHARACTER.—Calyx five-cleft. Corolla campanulate, five-lobed. Stamens five. Fruit succulent, three-seeded. Upright deciduous shrubs, with cymose flowers and simple leaves. (*Lindley.*)

DESCRIPTION, &c.—All the species belonging to the genus *Viburnum* are well known, either as native shrubs or as cultivated in gardens. Of the exotic species some are evergreens, and have their flowers tinged with pink, as, for example, the well-known *Laurustinus*; but the British species are both deciduous shrubs, with white flowers. The name of *Viburnum* is said to be derived from the Latin word *vīo*, to tie; because the branches of

some of the species were so flexible as to be used by the ancient Romans for tying bundles of fagots and other things, as we now use the branches of some kinds of Willow. The genus is placed in the Linnaean class Pentandria, on account of its five stamens; and in the order Trigynia, from its three styles.

1.—THE WAY-FARING TREE. (*VIBURNUM LANTANA, Lin.*)

SYNONYME.—Meal Tree.

ENGRAVINGS.—Eng. Bot., t. 331; 2nd ed., t. 442.

SPECIFIC CHARACTER.—Leaves heart-shaped, serrated, veiny; downy beneath. (*Smith.*)

DESCRIPTION, &c.—This species is common in woods and hedge-rows in every part of England. It is a thickly-branched shrub, or small tree, which grows to a larger size in Scotland and the north of England than in the south, and which is most abundant on calcareous soils. The flowers, which appear in June, are whitish; and the fruit, which is a berry, is first red and afterwards black. The young shoots and under-surface of the leaves are thickly covered with tufts of down, which has given rise to the name of Meal Tree. The following beautiful lines, addressed to this tree, are by William Howitt:—

“ Way-faring tree! what ancient claim
Hast thou to that right pleasant name?
Was it that some faint pilgrim came
Unhopedly to thee,
In the brown desert’s weary way,
Mid toil and thirst’s consuming sway,
And there, as ‘neath thy shade he lay,
Blest the way-faring tree.

Or is it that thou lovest to show
Thy coronets of fragrant snow,
Like life’s spontaneous joys that flow
In paths by thousands beat?
Whate’er it be, I love it well;
A name, methinks, that surely fell
From poet, in some evening dell,
Wandering with fancies sweet.”

2.—THE GUELDER-ROSE. (*VIBURNUM OPULUS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 332; 2nd ed., t. 443.

SPECIFIC CHARACTER.—Leaves lobed. Foot-stalks beset with glands. (*Smith.*)

DESCRIPTION, &c.—This beautiful tree, or rather shrub, which is so well known in gardens, is only found in a wild state in moist woods, and hence it is called in some country places the Water Elder. The Germans call it the Snow-ball Tree, from its balls of snowy flowers, which are produced in erect cymes. The fruit is a roundish berry, and is produced in drooping clusters. This shrub is common in every part of England where the ground is moist, and its flowers appear early in June. The following beautiful lines on this tree are by Cowper:—

* * * * “ The snow-flower tall,
Throwing up into the darkest gloom
Of neighbouring Cypress or more sable Yew,
Her silver globes, light as the foaming surf
That the wind severs from the broken wave.”

GENUS V.

THE ELDER. (*SAMBUCUS, Lin.*)

Lin. Syst. PENTANDRIA TRIGYNIA.

GENERIC CHARACTER.—Calyx five-cleft. Corolla rotate, five-lobed. Stamens five. Berry three-seeded. Upright deciduous shrubs, with pinnated leaves, and cymose flowers. (*Lindley.*)

DESCRIPTION, &c.—There are only two species of this genus natives of Britain, and only one of them is at all common. The name of *Sambucus* is derived from a Greek word, signifying a musical instrument, in the

construction of which the wood is supposed to have been employed. The genus is placed in the Linnaean class Pentandria, from its five stamens; and in the order Trigynia, from its three styles.

1.—THE DWARF ELDER, OR DANEWORT. (*SAMBUCUS EBULUS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 475; 2nd ed., t. 444.

SPECIFIC CHARACTER.—Cymes with three main branches. Stipulas leafy. Stem herbaceous. (*Smith.*)

DESCRIPTION, &c.—This plant is only found in some parts of England; but where it does grow, it is generally in large patches, which cover the ground entirely for a considerable distance, as it spreads rapidly by means of its creeping roots. It bears abundance of purplish flowers, and these are succeeded by a number of small black berries, which are violently cathartic in their properties. The whole plant is rather ornamental; but it has such a very disagreeable smell, that no animal will touch it. It is a perennial, and its flowers are produced in July.

2.—THE COMMON ELDER. (*SAMBUCUS NIGRA, Lin.*)

ENGRAVINGS.—Eng. Bot. t. 476; 2nd ed. t. 445.

SPECIFIC CHARACTER.—Cymes with five main branches. Stipulas obsolete. Leaflets ovate. Stem arboreous. (*Smith.*)

DESCRIPTION, &c.—The common Elder is one of the most abundant of the British low trees, as it is found in every cottage and farm garden, and almost in every hedge. One reason of its being so abundant is, no doubt, the great use that is made, by cottagers and country people generally, of its fruit; as on this account, they would rather encourage than check its growth. Elder-wine is a well known cordial, and what is called elder-rob is universally recommended as a remedy for a sore throat. Different preparations of elder are also given to children for various complaints; and, in short, many country house-wives would find the loss of their elder bushes a very serious evil. The plant is generally only a shrub in England; but it becomes a tree in Scotland, and towards the north of that country it frequently attains the height of thirty feet. The beautiful cut-leaved Elder of the gardens is only a variety of the common species.

§ 2.—*Corneæ*, Kunth. *Corolla polypetalous.*

GENUS VI.

THE DOG-WOOD. (*CORNUS, Lin.*)

Lin. Syst. TETRANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx four-toothed, deciduous. Petals four. | or herbaceous plants, with simple leaves, and cymose or umbellate Stamens four. Drupe with a two-celled nut.—Erect deciduous shrubs | flowers. (*Lindley.*)

DESCRIPTION, &c.—There are only two species of *Cornus* natives of Great Britain, and only one of these is a shrub. The name of *Cornus* is derived from *cornu*, a horn; in allusion to the hard nature of the wood. The genus is placed in the Linnaean class Tetrandria, on account of its four stamens; and in the order Monogynia, from its single style.

* *Flowers naked.*

1.—THE COMMON DOG-WOOD. (*CORNUS SANGUINEA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 249; 2nd ed., t. 227.

SPECIFIC CHARACTER.—Branches straight. Leaves green on both sides. Cymes naked, flat. (*Smith.*)

DESCRIPTION, &c.—This shrub grows abundantly in every part of Great Britain, but most plentifully on

chalky soils. It flowers in June, and ripens its berries in August ; about which time the leaves and branches begin to take a reddish hue, which gradually deepens, as the season advances, till the branches become a deep red, and the leaves take a purplish hue. The appearance of the red wood, which continues during the whole of the winter, is very striking in the woods, and renders this plant more ornamental during winter than at any other season of the year, as the flowers are small, and being greenish, are of no particular beauty.

* * *Flowers in an involucrum.*

2.—THE DWARF CORNEL. (*CORNUS SUECICA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 310 ; 2nd ed., t. 228.

SPECIFIC CHARACTER.—Herbaeouſ. Umbel between two branches,

| stalked, with an involucrum. Ribs of the leaves but slightly combined. (*Smith.*)

DESCRIPTION, &c.—This is a perennial plant which flowers in June and July, and produces its pretty red berries, which are good to eat, in autumn. It is only found on the hills in the north of England and in Scotland. It is a dwarf plant, and consequently much less conspicuous than the common Dog-wood ; but its flowers, though not very large, are more ornamental than those of that species, and bear more resemblance to those of the beautiful Cornel Tree of Europe.

GENUS VII.

THE IVY. (*HEDERA, Lin.*)

Lin. Syst. PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-toothed. Petals five. Stamens | seeded. Climbing evergreen shrubs, with umbellate flowers and simple five. Anthers forked at the base. Berry succulent, five-celled, five- | leaves. (*Lindley.*)

DESCRIPTION, &c.—There is only one species of Ivy a native of Britain, but it has numerous varieties. The name of *Hedera* is derived from a Greek word signifying to clasp, or cling to ; in allusion to the hold which the Ivy takes of everything within its reach. The genus is placed in the Linnæan class Pentandria, from its five stamens ; and in the order Monogynia, from its single style.

1.—THE COMMON IVY. (*HEDERA HELIX, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1267 ; 2nd ed., t. 344.

SPECIFIC CHARACTER.—Leaves some ovate, some lobed. (*Smith.*)

DESCRIPTION, &c.—The British Ivy is so common, that it scarcely needs description. There are, however, some things respecting it which are either only imperfectly known, or generally misunderstood. As for example, what are called its tendrils are, in fact, its roots, which can enter into crevices, or the ground ; but cannot embrace any object they may be near, though they frequently attach themselves to a tree, by dilating themselves to fill up the interstices of the bark. It is thus evident that the Ivy is not injurious to trees, like the Honeysuckle, or any other climbing shrub ; but, in fact, it may be said to be useful, in affording a shelter from the cold. The smell of the Ivy was anciently supposed to prevent persons becoming intoxicated with wine ; and, hence, Ivy crowns were worn by the ancients at their banquets, and the Ivy was dedicated to Bacchus. On

this account also the Ivy was formerly used to hang at the door of inns, to show that wine was sold there ; and this custom, which is still in use in the south of France, is alluded to in the following curious old lines :—

“ Nay, Ivy, nay, it shall not be I wys ;
 Let Holly have the mastery, as the manner is.
 Holly stands in the hall, fair to behold ;
 Ivy stands without the door ; she is full sore a-cold.”

In the latter part of the same song, the writer, however, seems to assert that birds are not fond of Ivy-berries, and that they prefer those of the Holly. This, however, is so far from being the case, that all kinds of birds are remarkably fond of Ivy-berries, particularly the thrush and the blackbird. It is true that these birds reject the seeds, and these are found in great quantities near their nests. The seeds of the Ivy, when deprived of the pulpy matter which surrounds them, bear considerable resemblance to grains of wheat ; and hence the numbers that are sometimes found lying about are supposed to have given rise to the stories of wheat being rained from the clouds, which were once so popular. The Ivy, when young, has a three-lobed leaf ; but when it takes a tree-like character, and forms flowers and seeds, the leaves become ovate. The flowers appear from October till November ; and the berries, which hang on all the winter, are smooth and black. The Ivy is the badge of the Highland clan Gordon.

CHAPTER XLII.

THE LORANTHUS FAMILY. (LORANTHEÆ, Rich. and Juss.)

CHARACTER OF THE ORDER.—Calyx superior, with two bractæ at the base. Corolla with four or eight petals, more or less united at the base. Stamens equal in number to the petals, and opposite to them. Ovarium one-celled ; ovulum pendulous ; style one or none ; stigma simple. Fruit succulent, one-celled. Seed solitary, pendulous ; testa membranous ; embryo cylindrical, longer than the fleshy albumen ; radicle naked, clavate, superior.—Parasitical herbaceous plants. Leaves opposite, veinless, fleshy, without stipulæ. Flowers often monœcious, axillary or terminal, solitary, corymbose, or spiked. (Lindley.)

DESCRIPTION, &c.—The only British plant belonging to this order is the common Mistletoe ; the *Loranthus*, from which it takes its name, being only found on the Continent.

GENUS I.

THE MISSELTOE. (VISCUM, Lin.)

Lin. Syst. DIŒCIA TETRANDRIA.

GENERIC CHARACTER.—Diœcious. Calyx an entire margin. Corolla | the petals. Female. Style very small. Stigma capitate. Berry | deeply four-elelf, fleshy. Male. Anthers sessile, in the middle of one-seeded, crowned with the calyx. (Lindley.)

DESCRIPTION, &c.—There is only one species of this genus a native of Britain, though seventy-six species are said to exist. The name of *Viscum*, which signifies bird-lime, alludes to the slimy juice of the fruit, which is occasionally made into bird-lime, and which was anciently preferred to that made from the Holly. The word Mistletoe is derived from *mistelta*, the Saxon name for the plant, which also alludes to a slimy substance. The genus is placed in the Linnæan class Diœcia, on account of the male and female flowers being separate ; and in the order Tetrandria, from its four stamens.

1.—THE COMMON MISSELTOE. (*VISCUM ALBUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1470; 2nd ed., t. 1386.

SPECIFIC CHARACTER.—Leaves obovate-lanceolate, obtuse. Stem forked, with sessile intermediate heads, of about five flowers. (*Smith.*)

DESCRIPTION, &c.—This is a very curious parasitical plant, which grows upon various kinds of trees, but most commonly on the Apple. It is most rare upon the Oak; and anciently it was highly valued when found upon that tree. The Druids used to perform divers ceremonies on the first day of every year, and to walk in solemn procession through their Oak groves till they found a tree bearing the Mistletoe, when the principal Druid, clad in a white garment, ascended the tree and cut the Mistletoe with a consecrated golden knife, which was never used for any other purpose. When the Mistletoe was cut, the other Druids held a white cloth to receive it; and it was afterwards distributed among the people as a preservative against witchcraft, and a cure for several diseases. When no Mistletoe could be found growing on an Oak, it was considered a sign of some dreadful national calamity; but the Druids appear to have taken every precaution against this disaster, as we always find that an Apple orchard was planted close to the sacred Oak groves of the Druids; and as it is well known that the Mistletoe grows more freely on the Apple than on any other plant, it was very easy to obtain the Mistletoe and to make it appear to be growing on the Oak when it did not do so naturally. The Mistletoe was dedicated to the Saxon goddess Friga, who was the same as Venus; and hence, it is supposed, arose the custom of kissing under the Mistletoe at Christmas. This custom is of great antiquity; and in the feudal ages the Mistletoe was gathered with great solemnity on the evening before the Christmas-day, and hung up in the baron's hall, with loud shouts and rejoicings:—

“ On Christmas Eve the bells were rung;
 On Christmas Eve the mass was sung:
 That only night in all the year
 Saw the stoled priest the chalice rear.
 The damsel donned her kirtle sheen;
 The hall was dressed with holly green:
 Forth to the woods did merry men go,
 To gather in the Mistletoe.
 Then opened wide the baron's hall
 To vassal, tenant, serf, and all.”—SCOTT.

It was formerly supposed that the Mistletoe would only grow naturally, and that it could not be cultivated or have its berries sown. It is now found, however, that it may be made to grow on an Apple-tree, and probably on trees of other kinds, by pressing a ripe berry on a crack in the bark, and then tying paper loosely over it, so as to preserve it from the birds, and yet to admit air to it. In the year 1836, several experiments were tried to make the Mistletoe grow on trees of different kinds in our little garden at Bayswater. The first that germinated was on a Cherry-tree, and the second on a Thorn; but both soon withered. Shortly after, three of the berries that had been sown on Apple-trees began to grow, and these are still (1845) alive; one of them having become a large plant. When the seed of the Mistletoe begins to grow it sends out a young root, which at first grows out horizontally from the tree; but in a few days it bends over till it reaches the bark, which it strikes into, and thus presents a singular appearance, looking like a little green arch, both ends of which are inserted in the bark. The point of the root which touches the bark is swelled out like the sucker of a house-fly. The arch remains sometimes two or three months without much apparent change; but at last, that

part which was the seed withers, and a bud appears from the other side, which soon develops itself into a pair of leaves. The plant generally grows very slowly, and does not form seeds till it has been established for several years. When the tree on which Mistletoe has grown is cut down, a number of fine green thread-like roots may be seen extending themselves through the wood. It is said that the Mistletoe will not thrive unless the head of the tree it grows upon be left on, in order to draw up the sap; but at Walton Hall, the seat of Charles Waterton, Esq., the head of an old Thorn has been cut off, in order that the whole strength of the root may go to the nourishment of an enormous bush of Mistletoe which grows upon it, and which has quite taken the place of the natural head of the tree.

CHAPTER XLIII.

THE BILBERRY FAMILY. (VACCINIEÆ, *Dec.*)

CHARACTER OF THE ORDER.—Calyx superior, entire, or with from four to six lobes. Corolla monopetalous, lobed as often as the calyx. Stamens distinct, double the number of the lobes of the corolla, inserted into an epigynous disk; anthers with two horns and two cells. Ovarium inferior, four or five-celled, many-seeded; style

simple; stigma simple. Berry crowned by the persistent limb of the calyx, succulent, four or five-celled, many-seeded. Seeds minute; embryo straight, in the axis of fleshy albumen; cotyledons very short; radicle long, inferior.—Shrubs with alternate coriaceous leaves. (*Lindley.*)

DESCRIPTION, &c.—The plants belonging to this order are low shrubs, with pretty bell-shaped flowers, and eatable berry-like fruit. They bear considerable resemblance in the shape of the anthers to the Heath Family, but they differ widely in the leaves and in the fruit. There are only two genera in this order, each of which is in the Linnaean class Octandria, on account of its eight stamens; and in the order Monogynia, from its single style. The two genera were, in fact, included in one by Linnaeus.

GENUS I.

THE WHORTLE-BERRY. (VACCINIUM, *Lin.*)

Lin. Syst. OCTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx entire or toothed. Corolla four-cleft, with erect segments. Stamens eight. Berry crowned with the per-

sistent calyx, many-seeded.—Evergreen or deciduous shrubs. Leaves simple. Flowers axillary or racemose. (*Lindley.*)

DESCRIPTION, &c.—This genus has been divided from the Cranberry principally on account of its bell-shaped flowers. The word *Vaccinium* is probably derived from *vaccu*, a cow; cows being said to eat this shrub. The English name of Cowberry, which is given to one of the species, is probably derived from the same source. Whortle-berry is a corruption of wurt-berry, wurt being the Saxon word for a very low shrub or root, in allusion to the plants growing so close to the ground.

* *Leaves deciduous.*

1.—THE BILBERRY, OR COMMON WHORTLE-BERRY. (VACCINIUM MYRTILLUS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 456; 2nd ed., t. 551; and our *fig.* 1, in Pl. 41.

ovate, serrated, membranous, smooth, deciduous. Stem acutely angular. Calyx wavy, nearly entire. (*Smith.*)

SPECIFIC CHARACTER.—Stalks solitary, single-flowered. Leaves

DESCRIPTION, &c.—The common Bilberry is abundant on heaths and stony moors in every part of Great Britain; and it grows on some of the Scotch mountains as high as four thousand feet above the level of the sea.

The berries are generally of a bluish black, covered with a fine bloom ; but a variety has been found with white berries. The legendary story of the Bilberry is, that Cenomaüs, father of the beautiful Hippodamia, declared that no one should marry his daughter who could not conquer him in a chariot race. One of the young lady's suitors bribed Myrtillus, the attendant of Cenomaüs, to take the lynch-pin out of his master's chariot, in consequence of which Cenomaüs was killed. Myrtillus, seeing his master dead, repented so bitterly the crime he had committed that he threw himself into the sea, and was afterwards changed by Mercury into the Whortle-berry, which still retains the name of Myrtillus in memory of the unfortunate youth.

2.—THE BOG WHORTLE-BERRY, OR GREAT BILBERRY. (*VACCINIUM ULIGINOSUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 581 ; 2nd ed., t. 552.

SPECIFIC CHARACTER.—Stalks somewhat aggregate, single-flowered. Leaves obovate, entire, smooth, deciduous. Branches round. (*Smith.*)

DESCRIPTION, &c.—The Great Bilberry is abundant on mountainous boggy heaths in the north of England, and in the Highlands of Scotland. The flowers, which are smaller than those of the common kind, are very pretty, and appear in great abundance in May ; and the berries, which are large, are well-tasted, but are said to produce pains in the head and giddiness to those who eat abundantly of them. The plant is more decidedly woody than the common Bilberry, and, though more slender in its branches, grows to a greater height.

* * *Leaves evergreen.*

3.—THE COW-BERRY, OR RED WHORTLE-BERRY. (*VACCINIUM VITIS IDÆA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 598 ; 2nd ed., t. 553.

| *cave* bracteas, longer than the flower-stalks. Leaves obovate, revolute, minutely toothed ; dotted beneath. Corolla bell-shaped. (*Smith.*)

SPECIFIC CHARACTER.—Clusters terminal, drooping, with ovate con-

DESCRIPTION, &c.—The Cowberry is abundant on dry, stony heaths and moors, where very few other plants will grow. Its leaves resemble those of the box both in colour and texture. Its flowers, which are of a delicate flesh-colour, appear in May and June ; and its berries, which are of a rich crimson, are ripe in August. This plant is the badge of the clan M'Leod.

GENUS II.

THE CRANBERRY. (*OXYCOCCUS, Rich.*)

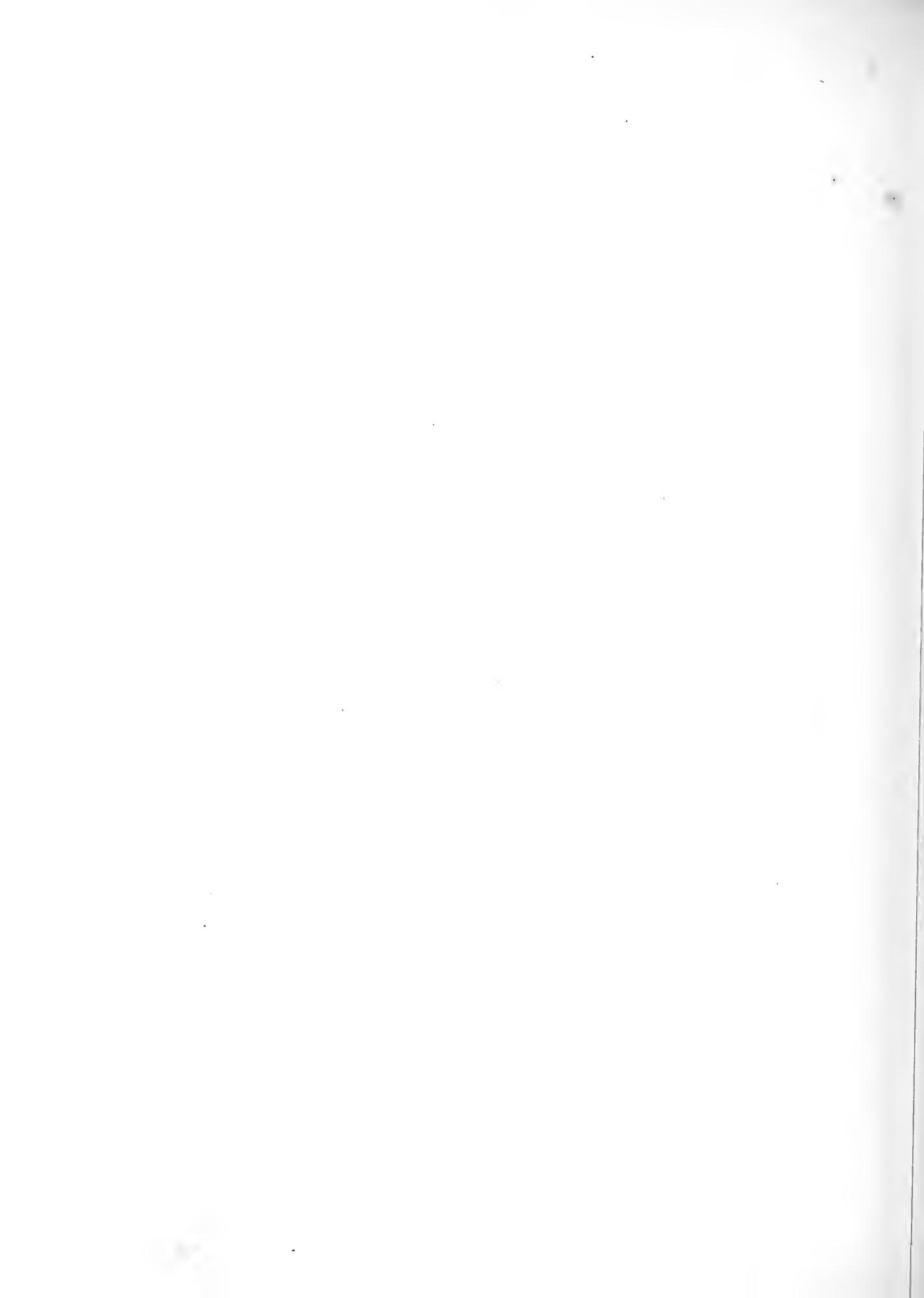
Lin. Syst. OCTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx toothed. Corolla four-cleft, with reflexed segments. Berry crowned with the persistent calyx, many-seeded.—Evergreen trailing shrubs. (*Lindley.*)

DESCRIPTION, &c.—The *Oxycoccus* has been separated from the Whortle-berry on account of its deeply-cleft corolla. It has also very small leaves, and a procumbent habit of growth. The name of *Oxycoccus* is derived from two Greek words, signifying an acid berry ; in allusion to the acid taste of the fruit. The English name of Cranberry is said to allude to the fruit, with its stalk, having somewhat the appearance of a crane's neck and head.



1. Bilberry 2. Cranberry 3. Round-headed Rampion 4. Spreading
 Bell-flower 5. Common Sheep's-bit or Sheep's Scabious 6. Water Lobelia.
 7. Fullers Teasel 8. Devil's-bit Scabious.



1.—THE COMMON CRANBERRY. (*OXYCOCUS PALUSTRIS*, *Rich.*)SYNONYME.—*Vaccinium oxyccoccus*, *Lin.*ENGRAVINGS.—Eng. Bot., t. 319; 2nd ed., t. 554; and our *fig. 2*, in Pl. 41.SPECIFIC CHARACTER.—Leaves ovate, entire, smooth, revolute, acute. Flowers terminal. (*Lindley.*)

DESCRIPTION, &c.—The Common Cranberry is very abundant in the north of England, particularly near Longtown, which forms the boundary between Cumberland and Scotland; as in the neighbourhood of this town there are large morasses, which are exactly the kind of soil suiting this plant. When the Cranberry is cultivated in gardens, it is generally grown on the margin of a pond, where only its roots reach the water; but in its native bogs, it grows in water so deep that the people who gather the berries are obliged to wade up to their knees to do so. The flowers appear in June, and the berries are ripe in August or September.

CHAPTER XLIV.

THE CAMPANULA FAMILY. (CAMPANULACEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Calyx superior, five-lobed. Corolla monopetalous, inserted into the top of the calyx, five-lobed, withering on the fruit; regular. Stamens five, inserted into the calyx, alternately with the lobes of the corolla. Anthers distinct. Pollen spherical. Ovarium inferior, with two or more polyspermous cells. Style simple; stigma with from two to five lobes. Fruit dry, crowned by the withered

calyx and corolla, with from three to five cells, dehiscing by lateral irregular apertures by valves. Seeds numerous, attached to a placenta in the axis; embryo straight in fleshy albumen; radicle inferior.—Herbaceous plants on under shrubs. Leaves alternate. Flowers single, or in heads; usually purple. (*Lindley.*)

DESCRIPTION, &c.—All the Campanulaceæ are perennial plants, generally with milky juice, and very ornamental flowers. The seeds are numerous, and the calyx generally remains attached to the fruit when ripe. The British genera contained in this order are placed in the Linnæan class and order Pentandria Monogynia, on account of their five stamens and their single style.

GENUS I.

THE RAMPION. (*PHYTEUMA*, *Lin.*)*Lin. Syst. PENTANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx five-cleft. Corolla rotate, with a very short tube, and five long linear segments. Stamens five. Stigma three- parted. Capsule three-celled, opening by lateral perforations.—Flowers in spikes or heads. (*Lindley.*)

DESCRIPTION, &c.—This genus is distinguished from the Campanula by the crowded mass of the flowers, and by the long horn-like buds, which open first at the lower part. The stems are milky, and the root of one of the species was formerly used in salads. The name of *Phyteuma* is derived from a Greek word signifying the plant; and it is supposed to have been given to this genus in consequence of some medicinal properties which were formerly attributed to it, and which were supposed to render it superior to other plants.

1.—THE ROUND-HEADED RAMPION. (*PHYTEUMA ORBICULARE*, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 142; 2nd ed., t. 305; and our *fig. 3*, in Pl. 41.SPECIFIC CHARACTER.—Flowers in a roundish head. Leaves crenate; radical ones heart-shaped, or elliptic-lanceolate. (*Smith.*)

DESCRIPTION, &c.—This species is only found in Surrey, and some other places in the south of England, where it grows about a foot high, and flowers in July and August.

THE SPIKED RAMPION. (P. SPICATUM, *Lin.*)

This is a plant of no beauty, with a twisted stem three or four feet high, and a thick fleshy root, which was formerly sliced and eaten in salads, as beet-root is now. The plant is only found in Sussex.

GENUS II.

THE CORN BELL-FLOWER. (PRISMATOCARPUS, *L'Heritier.*)

Lin. Syst. PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Corolla rotate, with a flat limb. Capsule prismatical, two or three-celled, dehiscing towards the top. (Dec.)

DESCRIPTION, &c.—The only British species in this new genus is a little weed, very common in corn fields, with extremely small purplish-lilac flowers, which do not possess the slightest beauty; though Sir J. E. Smith supposes the plant to be a variety of the beautiful garden flower so well known under the name of Venus's Looking-glass. The present species is an annual, which is only found in chalky soils in the south of England. The name of *Prismatocarpus* signifies prism-shaped fruit; in allusion to the shape of the seed-vessel.

GENUS III.

THE CAMPANULA, OR BELL-FLOWER. (CAMPANULA, *Lin.*)

Lin. Syst. PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-cleft, sometimes with the recesses reflexed. Corolla campanulate, five-cleft. Stamens five, with the filaments broadest at the base. Stigma four or five-parted. Capsule three or five-celled, opening by perforations towards the base. (Lindley.)

DESCRIPTION, &c.—The genus *Campanula* is composed of perennial plants, with milky juice, and very ornamental flowers. The genus was formerly much more extensive than it is now; the *Prismatocarpus* having been removed from it, on account of some difference in the shape of the capsule. The British *Campanulas* are most of them very ornamental, and many of them are cultivated in gardens. The name of *Campanula* signifies a little bell; in allusion to the bell-like shape of the flowers.

1.—THE HARE-BELL. (CAMPANULA ROTUNDIFOLIA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 866; 2nd ed., t. 296.

SPECIFIC CHARACTER.—Radical leaves heart or kidney-shaped, serrated; stem-leaves linear, entire. (Smith.)

DESCRIPTION, &c.—This is one of the commonest British flowers, and yet it is one of the most beautiful, as nothing can surpass the clear lovely blue of the flowers, which tremble so lightly upon their slender stalks.

“ The Hare-bell, bright and blue,
That decks the dingle wild,
In whose cerulean hue,
Heaven's own blest tint we view
On days serene and mild.
How beauteous, like an azure gem,
She droopeth from her graceful stem.”—MISS STRICKLAND.

On the Scottish heaths this plant is so conspicuous, that the Blue-bell of Scotland is one of its most popular names. Its other popular name, Hare-bell, is said to have been originally Air-bell; in allusion to its delicate transparent blue, which so closely resembles the beautiful blue of the sky. Some writers have supposed that the

wild Hyacinth is the Hare-bell of the poets ; but this can hardly be, as the colour is by no means a cerulean blue, and the stem of the wild Hyacinth is much too thick to rise again elastic when trodden upon, as is described by Scott, in the following beautiful lines :—

“ A foot more light, a step more true,
Ne'er from the heath-flower dash'd the dew ;
E'en the slight hare-bell raised its head,
Elastic from her airy tread ! ”

2.—THE SPREADING BELL-FLOWER. (*CAMPANULA PATULA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 42 ; 2nd ed., t. 297 ; and our *fig. 4*, | the rest linear-lanceolate ; all even, crenate, and roughish. Stem with in Pl. 41. | several fringed angles. Panicle spreading. Calyx minutely toothed.

SPECIFIC CHARACTER.—Radical leaves obovate, or elliptic-lanceolate ; (*Smith.*)

DESCRIPTION, &c.—This is a biennial plant, growing in the south-eastern counties of England. The flowers are of a brilliant dark purple, and appear in July. The plant is bitter, and abounds in a milky juice ; but cows are very fond of it, and frequently eat it down to the root.

THE RAMPION BELL-FLOWER. (*C. RAPUNCULUS, Lin.*)

This species has a thick, milky root, bearing some resemblance to that of a radish in appearance, and that of a parsnip in sweetness. It was formerly cultivated in kitchen gardens as a vegetable, and eaten both raw, in salads, and boiled. The plant grows about three feet high ; and it has an angular stem, which is rough on the lower part, and rather small, dingy purple flowers, which appear in July and August.

THE PEACH-LEAVED BELL-FLOWER. (*C. PERSICIFOLIA, Lin.*)

This species is very handsome ; but it is very unlike most of the other kinds, as it consists of one single erect flower, which resembles in shape the common Hare-bell, though it is much larger. It is somewhat rare in this country, and has been only found in one place in Scotland.

THE GIANT BELL-FLOWER. (*C. LATIFOLIA, Lin.*)

This species is very common in the north of England and in Scotland, though it is comparatively rare in the south. It is a large, coarse-growing, perennial plant, four or five feet high, with broad, hairy leaves, and a very milky root. The flowers, which are very abundant, are produced in August, and are generally purple, though they occasionally vary to a pale rose-colour, and sometimes to white.

THE CREEPING BELL-FLOWER. (*C. RAPUNCULOIDES, Lin.*)

This species, which differs very little in appearance from the Canterbury Bell of the gardens, is only found wild in Yorkshire and the south of Scotland. The plant is a perennial, and where it has once established itself, it increases rapidly by its creeping roots. The flowers appear in July and August.

THE CANTERBURY BELL. (*C. TRACHELIUM, Lin.*)

This very beautiful species, which is also sometimes called the Nettle-leaved Campanula, is abundant in every part of England where the soil is sandy or gravelly, and it is particularly plentiful in the beautiful woods near Guildford and Godalming in Surrey. It is, however, called the Canterbury Bell because it is considered to be more plentiful in the neighbourhood of that city than anywhere else. There is a variety of this species with white flowers, which is very delicate.

THE CLUSTERED BELL-FLOWER. (*C. GLOMERATA, Lin.*)

This is only found in dry, chalky pastures, where the soil is light enough for it to penetrate with its long fibrous roots. Its flowers are small, and they are produced in great abundance in the months of July and August.

THE IVY-LEAVED BELL-FLOWER. (*C. HEDERACEA, Lin.*)

This is a most beautiful little plant, with very small pink flowers and delicate Ivy-shaped leaves. It grows in shady moist woods in several parts of England. It is a perennial, and flowers from June till August.

CHAPTER XLV.

THE LOBELIA FAMILY. (*LOBELIACEÆ, Juss.*)

CHARACTER OF THE ORDER.—Calyx superior, five-lobed, or entire. Corolla monopetalous, irregular, inserted in the calyx, five-lobed, or deeply five-cleft. Stamens five, inserted into the calyx alternately with the lobes of the corolla; anthers cohering; pollen oval. Ovarium inferior, with from one to three cells; ovula very numerous, attached either to the axis or the lining; style simple; stigma surrounded by a

cup-like fringe. Fruit capsular, one or more-celled, many-seeded, dehiscing at the apex. Seeds attached either to the lining or the axis of the pericarpium; embryo straight, in the axis of fleshy albumen; radicle pointing to the hilum.—Herbaceous plants or shrubs. Leaves alternate, without stipulae. Flowers axillary or terminal. (*Lindley.*)

DESCRIPTION, &c.—The order *Lobeliacæ* contains only two genera of British plants, viz. *Jasione* and *Lobelia*. They are both placed in the Linnæan class and order *Pentandria Monogynia*, from each flower having five stamens and a single style.

GENUS I.

THE SHEEP'S SCABIOUS. (*JASIONE, Lin.*)

Lin. Syst. PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-cleft. Corolla rotate, with a bifid. Capsule two-celled.—Flowers collected within a many-leaved very short tube, and five long, linear segments. Stamens five. Stigma involucrum. (*Lindley.*)

DESCRIPTION, &c.—The Sheep's Scabious is a curious little plant, of which only one British species is known. The origin of the name of *Jasione* is not known; but some authors have derived it from *ion*, a violet, to which, however, the plant does not bear the slightest affinity.

I.—THE COMMON SHEEP'S-BIT, OR SHEEP'S SCABIOUS. (*JASIONE MONTANA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 882; 2nd ed., t. 306; and our *fig. 5*, in Pl. 41.

SPECIFIC CHARACTER.—Leaves linear, waved, hispid; peduncles solitary, elongated; root annual. (*Hooker.*)

DESCRIPTION, &c.—This is a very singular plant, though it appears an exceedingly insignificant one. The root, though the plant is only an annual, is quite woody; and the pretty blue flowers are succeeded by curious bladdery capsules, which remain on long after the seeds are fallen. The flowers which compose the head, though so very small, are each perfect of its kind, and have each a separate calyx. This circumstance, and the anthers being united at the base, made Linnæus place the plant in his class *Syngenesia*, which is now confined to plants belonging to *Compositæ*. The Sheep's Scabious is generally found in mountain pastures, and in dry, sandy fields, where its heads of blue flowers are very conspicuous, in the absence of almost all other flowering plants.

GENUS II.

THE LOBELIA. (LOBELIA, *Lin.*)*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-toothed. Corolla two-lipped. Stigma blunt, usually two-lobed. Capsule two or three-celled.—
Flowers axillary, or in terminal spikes. (*Lindley.*)

DESCRIPTION, &c.—The ornamental exotic species of *Lobelia* that are common in our gardens are so very much more beautiful than the British kinds, that it is almost difficult to believe that they belong to the same genus. The British kinds are only two in number. The name of *Lobelia* is derived from L' Obel, who was a celebrated Flemish botanist in the time of James I., and who was appointed botanist and herbalist to that monarch.

1.—THE WATER LOBELIA. (LOBELIA DORTMANNIA, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 140; 2nd ed., t. 307; and our *fig. 6*, in Pl. 41.SPECIFIC CHARACTER.—Leaves linear, entire, of two longitudinal cells. Stem nearly naked. (*Smith.*)

DESCRIPTION, &c.—This is a perennial plant, which grows in great abundance in the lakes of Cumberland and Westmoreland; only the flowers, which are of a pale lilac, appearing above the surface of the water, though the bottom of the lake appears covered with a thick carpet of leaves. The flowers droop; but the seed, as it ripens, becomes erect. The whole plant abounds in a milky juice. The flowers appear in July.

THE BITING LOBELIA. (L. URENS, *Lin.*)

This species is only found in Devonshire, where it grows on the moors or waste lands, in situations slightly shaded by some kind of shrub. The whole plant abounds in milk, which is extremely acrid and has a most disagreeable smell. It is a perennial, and flowers in August and September.

CHAPTER XLVI.

THE VALERIAN FAMILY. (VALERIANÆ, *Dec.*)

CHARACTER OF THE ORDER.—Calyx superior; the limb either membranous or resembling pappus. Corolla monopetalous, tubular, inserted into the top of the ovary, with from three to five lobes, either regular or irregular; sometimes calcarate at the base. Stamens from one to five, inserted into the tube of the corolla, and alternate with its lobes. Ovarium inferior, with one cell, and sometimes two other abortive

ones; ovulum solitary, pendulous; style simple; stigmas from one to three. Fruit dry, indehiscent, with one fertile cell, and two empty ones. Seed solitary, pendulous; embryo straight, destitute of albumen; radicle superior.—Herbs. Leaves opposite, without stipulae. Flowers corymbose, panicled, or in beads. (*Lindley.*)

DESCRIPTION, &c.—The British plants contained in this order, though they are now divided into three genera, were all included by Linnæus in the genus *Valeriana*; but they have been very properly divided, as they differ materially.

GENUS I.

THE VALERIANELLA. (VALERIANELLA, *Tourn.*)*Lin. Syst.* TRIANDRIA MONOGYNIA.

GENERIC CHARACTER.—Corolla regular, five-lobed, without a spur. Stamens three. Fruit membranous, with 3 cells, crowned with the erect, not involute limb of the calyx. (*Dec.*)

DESCRIPTION, &c.—This genus was separated from *Valeriana* on account of the fruit being three-celled, and

without the crown of feathery pappus which is so remarkable in the common Valerian. The name of *Valerianella* signifies little Valerian. This genus is called *Fedia* by some botanists; and it is placed in *Triandria Monogynia*, from its three stamens and its single style.

1.—THE CORN-SALAD, OR LAMB'S LETTUCE. (*VALERIANELLA OLITORIA*, *Mönch.*)

SYNONYMES.—*Valeriana olitoria*, *Lin.*; *V. locusta*, *Smith.*; *Fedia olitoria*, *Vahl.*

SPECIFIC CHARACTER.—Stem weak. Leaves lanceolate, entire. Fruit naked, roundish, compressed. (*Dec.*)

ENGRAVINGS.—Eng. Bot., t. 811; 2nd ed., t. 41.

DESCRIPTION, &c.—This is a well-known weed in corn-fields, which is often eaten raw, and sometimes cultivated as a salad plant. Its flowers are of no beauty, but they continue being produced all the summer.

THE OVAL-FRUITED CORN-SALAD. (*V. DENTATA*, *Dec.*)

This is probably only a variety of the common kind.

GENUS II.

THE VALERIAN. (*VALERIANA*, *Lin.*)

Lin. Syst. TRIANDRIA MONOGYNIA.

GENERIC CHARACTER.—Corolla regular, five-lobed, without a spur. Stamens three; otherwise as *Centranthus*. (*Dec.*)

DESCRIPTION, &c.—The plants left in this genus have all very curious seed-vessels; each being surrounded by a sort of crown, which gradually unrolls and becomes a sort of feathery fringe that serves to disperse the seed. The roots are strongly scented, and are said to be useful in medicine; and hence the plant takes its name, as the word *Valeriana* is derived from *valeo*, to be powerful, in allusion to its powerful effects in curing disease. This genus is placed in the Linnæan class and order *Triandria Monogynia*, from its three stamens and its single style.

THE SMALL MARSH VALERIAN. (*V. DIOICA*, *Lin.*)

This plant is very common in moist meadows, where it produces its pretty whitish flowers in June. The male and female flowers are on different plants, and those bearing male flowers are always much smaller than the others.

THE GREAT WILD VALERIAN. (*V. OFFICINALIS*, *Lin.*)

This plant grows in great abundance on the margins of rivers, where it attains a very large size; and in dry thickets, where it is of more humble growth. Cats are particularly fond of the smell of this plant. The root, in powder, is given in medicine, and the leaves are considered serviceable for wounds. The plant is a perennial, and it flowers in June.

THE HEART-LEAVED VALERIAN. (*V. PYRENAICA*, *Lin.*)

This is a very doubtful native, having been only found wild near Glasgow and Edinburgh. It is a perennial, and produces its flowers in July.

GENUS III.

THE RED VALERIAN. (CENTRANTHUS, *Dec.*)*Lin. Syst.* MONANDRIA MONOGYNIA.

GENERIC CHARACTER.—Corolla five-lobed, regular, with a spur. Stamen one. Fruit one-celled, crowned with the limb of the calyx, which changes into a feathery pappus. (*Dec.*)

DESCRIPTION, &c.—This genus has been separated from *Valeriana*, partly on account of its having only one stamen, and partly from the flower terminating in a spur. The name of the genus alludes to the latter peculiarity; the word *Centranthus* signifying a spurred flower. This genus is placed in the Linnæan class and order Monandria Monogynia, from its single stamen and single style.

1.—THE COMMON RED VALERIAN. (CENTRANTHUS LATIFOLIUS, *Dufresne.*)SYNONYME.—*Valeriana rubra*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 1531; 2nd ed., t. 37.

SPECIFIC CHARACTER.—Leaves ovate-lanceolate. (*Lindley.*)

DESCRIPTION, &c.—This very beautiful plant grows in the greatest profusion in the old chalk-pits in Kent, particularly on the banks of the Thames. It also frequently grows on ruined walls; but it appears only to thrive where it can have access to chalk or lime. It is a perennial, and flowers all the summer.

CHAPTER XLVII.

THE SCABIOUS FAMILY. (DIPSACEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Calyx superior, membranous, resembling pappus; surrounded by a scarious involucellum. Corolla monopetalous, tubular, inserted on the calyx; limb oblique, four or five-lobed, with an imbricated aestivation. Stamens usually four or five, alternate with the lobes of the corolla; anthers distinct. Ovarium inferior, one-celled, with a single, pendulous ovulum; style one; stigma simple. Fruit dry, various, indehiscent, one-celled, crowned by the pappus-like calyx; embryo straight in the axis of fleshy albumen; radicle superior.—Herbaceous plants or under-shrubs. Leaves opposite or whorled. Flowers collected upon a common receptacle, and surrounded by a many-leaved involucrum. (*Lindley.*)

DESCRIPTION, &c.—There are three British genera in this order, two of which were formerly included in the genus *Scabiosa*. They are all in the Linnæan class and order Tetrandria Monogynia, having each four stamens and a single style.

GENUS I.

THE TEASEL. (DIPSACUS, *Lin.*)*Lin. Syst.* TETRANDRIA MONOGYNIA.

GENERIC CHARACTER.—Involucellum with four sides, and eight little excavations. Calyx with a somewhat cyathiform limb. Stigma longitudinal. Leaflets of the involucrum longer than the bracteæ. Receptacle with spiny paleæ. (*Lindley.*)

DESCRIPTION, &c.—The British species belonging to this genus are herbaceous plants, with small flowers collected in large terminal heads, and broad connate leaves, which contain a considerable quantity of water in their hollow, and hence give rise to the scientific name of the genus; the word *Dipsacus* signifying to be thirsty.

1.—FULLER'S TEASEL. (*DIPSACUS FULLONUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 2080; 2nd ed., t. 194; and our *fig. 7*, in Pl. 41.

SPECIFIC CHARACTER.—Leaves combined, serrated. Scales of the receptacle hooked backwards. Involucrum reflexed. (*Lindley.*)

DESCRIPTION, &c.—This plant, being extensively cultivated in many parts of England, is probably not a true native, as many of the plants which appear to be growing wild, may have sprung from seeds dropped accidentally. It is a biennial, the flowers of which are not ornamental, but which is cultivated for the sake of the stiff-hooked scales of the receptacle, which render the dried heads useful in dressing cloth.

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THE WILD TEASEL. (*D. SYLVESTRIS, Lin.*)

This species is very common by road-sides, and on the banks of hedges, where it produces its pink flowers in July. It grows very strong and robust, but it is of no use, as the scales of the receptacle are not hooked. The leaves of this species form a very deep hollow, and hold so much water, that in many parts of the country the plant is known by the name of Venus's Kettle.

THE SMALL TEASEL. (*D. PILOSUS, Lin.*)

This species is known by the popular English name of the Shepherd's Staff, and at first sight it has more the appearance of a Scabious than a Teasel. It is a biennial, found only in moist calcareous soils, where it produces its flowers in August and September.

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GENUS II.THE SCABIOUS. (*SCABIOSA, Lin.*)

Lin. Syst. TETRANDRIA MONOGYNIA.

GENERIC CHARACTER.—Involucellum nearly cylindrical, with eight little excavations. Calyx with a limb consisting of five setæ, occasionally partially abortive. (*Coultier.*)

DESCRIPTION, &c.—The British species of Scabious are much less ornamental than the exotic kinds. The scientific name is derived from *scabies*, the leprosy, because it is said that some of the species were formerly used in curing that fearful disease.

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1.—THE DEVIL'S-BIT SCABIOUS. (*SCABIOSA SUCCISA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 878; 2nd ed., t. 197; and our *fig. 8*, in Pl. 41.

SPECIFIC CHARACTER.—Corolla in four equal segments. Heads nearly globular. Stem-leaves distantly toothed. (*Smith.*)

DESCRIPTION, &c.—This plant is most remarkable for its root, which when dug up looks as if the end of it had been just bitten off. The plant is a perennial, common in moist meadows, where it flowers from August till October.

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THE SMALL SCABIOUS. (*S. COLUMBRIA, Lin.*)

This is a very pretty little plant, found abundantly in the chalk districts of the south of England, but rare in the north. It is a perennial, and produces its heads of bright purple flowers from June till August.

GENUS III.
THE FIELD-SCABIOUS. (KNAUTIA, *Lin.*)

Lin. Syst. TETRANDRIA MONOGYNIA.

GENERIC CHARACTER.—Involucellum compressed, with four little excavations, closely surrounding the fruit, placed on a short stalk.
Calyx with a somewhat cup-shaped limb. (Lindley.)

DESCRIPTION, &c.—There is only one British species in this genus, and it is a very handsome plant, common in corn-fields, which is usually called the Field Scabious. The flowers are naturally of two shades of purple, but they have the peculiarity of turning to a bright green when exposed to the smoke of tobacco. The plant is a perennial, and it produces its flowers in July. The genus is named in honour of Dr. Knaut, a German botanist, who resided at Halle, and died in 1694.

CHAPTER XLVIII.

THE COMPOSITE FAMILY. (COMPOSITÆ, *Juss.*)

CHARACTER OF THE ORDER.—Calyx superior, closely adhering to the ovary, and undistinguishable from it; its limb either wanting, or membranous, divided into bristles, paleæ, hairs or feathers, and called pappus. Corolla monopetalous, superior, usually deciduous, either ligulate or funnel-shaped; in the latter case, four or five-toothed, with a valvate aestivation. Stamens equal in number to the teeth of the corolla, and alternate with them; the anthers cohering into a cylinder. Ovary inferior, one-celled, with a single erect ovulum; style

simple; stigmas two, either distinct or united. Fruit a small, indehiscent, dry pericarpium, crowned with the limb of the calyx. Seed solitary, erect; embryo with a taper, inferior radicle; albumen none. Herbaceous plants or shrubs. Leaves alternate or opposite, without stipulæ; usually simple. Flowers (called florets) collected in dense heads upon a common receptacle, surrounded by an involucrum. Bractæ either present or absent; when present, stationed at the base of the florets, and called paleæ of the receptacle. (Lindley.)

DESCRIPTION, &c.—This is one of the most extensive orders of British plants; but the numerous genera of which it is composed may be all divided into three tribes, the distinctions between which are very simple and easily remembered. In all the Compositæ, what is popularly called a flower is composed of a great number of small florets, each of which is perfectly distinct in itself. In most of the genera these florets are divided into two kinds: the central ones, which are yellow in the Daisy, being called the disk, and the outer ones, which are white in the Daisy, forming the ray. The disk florets are generally tubular; while those of the ray are what botanists call ligulate, that is, tubular towards the base, but opening so widely at the mouth as to appear flat. The flowers thus formed constitute the first tribe of the Compositæ, and this tribe contains twenty-seven genera, all of which bear more or less resemblance to the Daisy. The second tribe takes for its type the Artichoke, and its florets are all tubular; while the third tribe, which takes the Wild Succory for its type, has its florets all ligulate. There are only nine genera in the second tribe, and sixteen in the third; so that the two together do not contain so many genera as the first. All the plants belonging to the order Compositæ are included in the Linnæan class Syngenesia; but the genera were divided by Linnæus into five different orders.

I.—THE CORYMB-FLOWERED TRIBE.

Ray ligulate. Involucrum hemispherical or cylindrical.

GENUS I.

THE HEMP-AGRIMONY. (EUPATORIUM, *Lin.*)*Lin. Syst.* SYNGENESIA \textAE QUALIS.

GENERIC CHARACTER.—Involucrum cylindrical; scales imbricated, oval-oblong. Florets few, all tubular, hermaphrodite. Receptacle naked. Pappus pilose. (Dec.)

DESCRIPTION, &c.—There is only one species in this genus, viz. *E. cannabinum*. It is a coarse-growing plant, with purplish flowers, which it produces in July and August. It is a perennial, and it grows most luxuriantly in moist places. The genus is named from Empator, a surname of Mithridates, who is said to have used the plant in composing his celebrated antidotes. It is placed in the Linnæan class Syngenesia, like all the other Compositæ, from its anthers being united so as to form a tube; and in the order \textAE qualis, because each floret has both stamens and styles.

GENUS II.

GOLDYLOCKS. (CHRYSOCOMA, *Lin.*)*Lin. Syst.* SYNGENESIA \textAE QUALIS.

GENERIC CHARACTER.—Involucrum imbricated, hemispherical, or ovate; scales linear. Florets all hermaphrodite, tubular. Pappus hairy, ciliated. Receptacle excavated. (Dec.)

DESCRIPTION, &c.—The only British species belonging to this genus (*C. Linosyris*) is known by the popular English name of Goldylocks, in allusion to its immense masses of golden yellow flowers, which, from being supported on very slender stalks, wave to and fro in the wind. The leaves are also small and narrow, so that when seen at a little distance the whole plant appears to consist only of a long slender stem, and a large terminal mass of golden yellow flowers. The plant is a perennial, and its flowers appear in August and September. It is only found wild in the southern counties of England. *Chrysocoma* signifies literally golden hair. This genus is in the same Linnæan class and order as the preceding one.

GENUS III.

THE SPIKENARD. (CONYZA, *Lin.*)*Lin. Syst.* SYNGENESIA SUPERFLUA.

GENERIC CHARACTER.—Involucrum roundish, imbricated. Florets all tubular; in the centre five-toothed, hermaphrodite, in the ray barren, slender, three-toothed. Receptacle naked. Pappus hairy, ciliated. (Dec.)

DESCRIPTION, &c.—The Ploughman's Spikenard (*C. squarrosa*) is a downy herb of no beauty, which is very common on calcareous soils in every part of England. It is a biennial, and bears its yellowish flowers in September and October. The provincial names of Flybane and Fleabane, which are frequently given to this plant, allude to the popular notion that its smell, when it was burnt, would drive away all kinds of disagreeable insects. The scientific name of *Conyza*, which signifies a gnat, is supposed to allude to the same circumstance. This genus is in the same Linnæan class as the last; but it is placed in a different order, from part of its florets being perfect, and the rest containing only stamens.

GENUS IV.

THE ELECAMPANE. (INULA, *Lin.*)*Lin. Syst. SYNGENESIA SUPERFLUA.*

GENERIC CHARACTER.—Involucrum imbricated; outer scales terminated by a leafy appendage. Flowers radiant, with the ray yellow. Receptacle naked. Pappus hairy, simple. (*Lindley.*)

DESCRIPTION, &c.—The common Elecampane (*I. Helenium*) is a very singular-looking plant, having the florets of both the disk and the ray yellow, but the latter being very few in number and of an extraordinary length. The whole plant has a strong aromatic flavour, and abounds in a mucilage somewhat resembling starch. These qualities rendered it formerly a great favourite in domestic medicine, and it is still frequently used in country places as a stomachic and a carminative. It is also sold in confectioners' shops candied, and it forms a very agreeable kind of sweetmeat. It is found wild in various parts of England, Scotland, and Ireland; and, in fact, wherever the ground is at once moist enough, and rich enough to afford nourishment for its large fleshy root. The plant is a perennial, and the flowers appear in July and August. The words *Inula* and *Helenium* are said to be both derived from the Greek, and to signify that the plant sprang from the tears of Helen. This genus is in the same Linnaean class and order as the last.

GENUS V.

THE GOLDEN SAMPHIRE. (LIMBARDA, *Cassini.*)*Lin. Syst. SYNGENESIA SUPERFLUA.*

GENERIC CHARACTER.—Involucrum imbricated; scales without any appendage. Flowers radiant, with the ray yellow. Receptacle naked. Pappus hairy, simple. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species of this singular-looking plant, the flowering branches of which are thickly covered with smooth narrow leaves, laid over each other like scales. The flowers are of a golden yellow, with a large disk, and a very scanty ray. The lower leaves are thick and fleshy, and taste like those of Samphire. The plant is only found in salt marshes on the southern and western coasts of England. It is a perennial, with a creeping root, and a half-shrubby stem; and it produces its flowers in August. *Limbara* is slightly altered from *Limbarde*, the name under which the plant is known in France. This genus is in the same Linnaean class and order as *Conyza* and *Inula*.

GENUS VI.

THE FLEABANE. (PULICARIA, *Cassini.*)*Lin. Syst. SYNGENESIA SUPERFLUA.*

GENERIC CHARACTER.—Involucrum imbricated. Flowers radiant, with the ray yellow. Receptacle naked. Pappus double; the outer membranous. (*Lindley.*)

DESCRIPTION, &c.—There are two species of this genus, one of which (*P. dysenterica*) is common in ditches and watery places in every part of England. The stem and the under side of the leaves of this plant are so densely clothed with down as to appear quite white. The flowers are of a rich golden-yellow, deepening into

orange in the disk ; and the whole plant has a strong and somewhat disagreeable smell. When freshly gathered, it is also somewhat glutinous to the touch. It is a perennial, and flowers in August and September. The other species is an annual, with dull yellow flowers of no beauty, which is found occasionally in sandy soils in England. *Pulicaria* is derived from *pulex*, a flea. The genus is in the same Linnæan class and order as the last.

GENUS VII.

THE STAR-WORT. (ASTER, *Lin.*)

Lin. Syst. SYNGENESIA SUPERFLUA.

GENERIC CHARACTER.—Involucrum imbricated ; scales linear, acute. Flowers radiant ; of the ray female, in a single row, oblong, not yellow. Pappus hairy. Receptacle naked. (*Lindley.*)

DESCRIPTION, &c.—Though so many beautiful species of *Aster* are common in our gardens, only one species is a native of Great Britain, and that is comparatively very little known. This species is called the Sea Star-wort (*A. Tripolium*). It is a perennial, and it produces its pretty blue flowers in August and September. *Aster* signifies a star ; in allusion to the shape of the flowers. The genus is in the same Linnæan class and order as *Pulicaria*.

GENUS VIII.

THE CANADIAN FLEABANE. (ERIGERON, *Lin.*)

Lin. Syst. SYNGENESIA SUPERFLUA.

GENERIC CHARACTER.—Involucrum oblong, imbricated ; scales linear, acute, very numerous. Flowers radiant ; of the ray female, very narrow and numerous, in a double row, not yellow. Pappus hairy. Receptacle naked. (*Lindley.*)

DESCRIPTION, &c.—There are three, or, according to some botanists, four species of this genus, all insignificant little weeds. The name of *Erigeron* signifies early old ; in allusion to the habit of the plant, which soon loses its florets and remains covered with its bald receptacles instead of flowers. This genus is in the same Linnæan class and order as the last.

GENUS IX.

THE GOLDEN-ROD. (SOLIDAGO, *Lin.*)

Lin. Syst. SYNGENESIA SUPERFLUA.

GENERIC CHARACTER.—Involucrum imbricated. Flowers radiant ; of the ray yellow, about five. Receptacle naked. Pappus hairy. (*Dec.*)

DESCRIPTION, &c.—The common Golden-rod (*S. Virgaurea*) is a well-known autumnal flower in our gardens, where it flowers in September. It is found wild in woods and thickets in every part of England. Another species (*S. cambrica*) has been found on the Welsh mountains. Both are perennials. The word *Solidago* is derived from *solidare*, to unite ; from the juice of the leaves having been formerly considered to be efficacious in causing wounds to heal. This genus is placed in the same Linnæan class and order as the preceding one.

GENUS X.

THE CUDWEED. (GNAPHALIUM, *Lin.*)*Lin. Syst. SYNGENESIA SUPERFLUA.*

GENERIC CHARACTER.—Involucrum imbricated, with (often) coloured, membranous scales. Receptacle naked. Florets of the circumference subulate; some of the centre occasionally abortive. Pappus rough or feathery. (*Hooker.*)

DESCRIPTION, &c.—This genus consists of ten or twelve species, which some botanists divide into three genera; *Antennaria* and *Filago* being the names of the other two. The species are nearly all insignificant weeds; the common Everlasting (*G. margaritaceum*) being the only one that is at all ornamental. The name of *Gnaphalium* is derived from a Greek word signifying soft down or wool, in allusion to the down which covers the leaves and stem of this plant. This genus is in the same Linnæan class and order as the preceding one.

GENUS XI.

THE RAGWORT. (SENECIO, *Lin.*)*Lin. Syst. SYNGENESIA SUPERFLUA.*

GENERIC CHARACTER.—Involucrum with bracteolæ at the base; the scales scorched at the apex. Flowers either flosculosous or radiant. Receptacle naked. Pappus soft, hairy. (*Dec.*)

DESCRIPTION, &c.—There are numerous species in this genus, some of which are highly ornamental, though all of them are generally considered by the farmer and gardener to be very troublesome weeds. The name of *Senecio* signifies old man; and it is applied to this genus from the bald appearance of the receptacle when the florets have fallen. The genus is in the same Linnæan class and order as *Gnaphalium*.

1.—THE COMMON GROUNDSEL. (SENECIO VULGARIS, *Lin.*)

SYNONYME.—Simpson.

ENGRAVINGS.—Eng. Bot., t. 747; 2nd ed., t. 1151.

SPECIFIC CHARACTER.—Heads dispersed, without rays. Leaves

pinnatifid, toothed, obtuse, smoothish; clasping at the base. (*Lindley.*)

DESCRIPTION, &c.—This is perhaps the commonest of all weeds, and it is certainly the dread of all gardeners; as where it has once established itself it can scarcely be eradicated, the seeds are so abundant and the flowers so numerous. It affords, however, provision to a multitude of small birds, who derive sustenance from the flower buds, and points of the young shoots. It is an annual, and the flowers are produced all the year.

2.—THE COMMON RAGWORT. (SENECIO JACOBÆA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1130; 2nd ed., t. 1157.

SPECIFIC CHARACTER.—Rays spreading, oblong, toothed. Leaves | doubly pinnatifid, somewhat lyrate, with spreading, toothed, smooth segments. Stem erect. Fruit of the disk silky. (*Lindley.*)

DESCRIPTION, &c.—This plant is particularly abundant in neglected corn-fields in Scotland, where its bright golden-yellow flowers catch the eye of every traveller, and are sometimes so abundant as to create a doubt whether they are not the crop intended to grow in the field. The plant will only grow in dry soils. It is a perennial, and flowers in July and August.

3.—THE MARSH RAGWORT. (*SENECIO AQUATICUS*, *Hudson.*)

ENGRAVINGS.—Eng. Bot., t. 1131; 2nd ed., t. 1158; and our *fig. 1*, | lyrate, serrated; the lowermost obovate and undivided. Fruit all in Pl. 42.

SPECIFIC CHARACTER.—Rays spreading, elliptic-oblong. Leaves

DESCRIPTION, &c.—This plant is found in marshes and wet meadows; and it is so closely allied to *S. Jacobaea* that it has been supposed to be only a variety of that plant, growing in moist situations instead of dry ones. It is found in every part of Great Britain. It is a perennial, and flowers from July to October.

4.—THE BIRD'S-TONGUE. (*SENECIO PALUDOSUS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 650; 2nd ed., t. 1159. | Leaves lanceolate, tapering, sharply serrated, somewhat cottony beneath.

SPECIFIC CHARACTER.—Rays spreading, toothed. Heads corymbose. | Stem perfectly straight, hollow. (*Lindley.*)

DESCRIPTION, &c.—This very handsome species is found in the ditches and fens of Lincolnshire, Cambridgeshire, and Suffolk, where it is called the Great Fen Ragwort, and where it forms a truly magnificent plant, frequently growing to the height of six feet and upwards, with flowers two inches or more in diameter. It is a perennial, and produces its golden-yellow flowers in June and July.

There are numerous other species of *Senecio*, some of which are known by the name of Ragwort, and some of which are called different kinds of Groundsel; but generally speaking there is nothing particularly remarkable in them, with the exception, perhaps, of what is called the Stinking Groundsel (*S. viscosus*), which is covered with glutinous hairs that catch various kinds of insects and light substances that blow against them, and which have a most intolerable smell.

GENUS XII.

THE LEOPARD'S-BANE. (*DORONICUM*, *Lin.*)

Lin. Syst. SYNGENESIA SUPERFLUA.

GENERIC CHARACTER.—Involucrum equal, with the scales in a | the flocculous florets simple, of the radiant florets none. Receptacle double row. Flowers radiant; those of the ray female. Pappus of | naked. (*Dec.*)

DESCRIPTION, &c.—The only British species of this genus (*D. Pardalianches*) is a magnificent plant, with large yellow flowers, which appear from June till September. Some botanists suppose that there are two British species of this genus; but others think the two kinds that have been found are merely variations produced by soil or climate. The plant is a perennial, and it is generally found in moist woods. The name of *Doronicum* is by some said to be derived from an Arabic word signifying poison; but others trace its origin from two Greek words signifying a gift and a victory; in allusion to the fondness which wild beasts, particularly leopards, have for the leaves and fleshy roots, the juice of which has a stupefying effect upon them. The English name of Leopard's-bane alludes to the same circumstance. This genus is in the same Linnaean class and order as the preceding one.

GENUS XIII.

THE COLT'S-FOOT. (TUSSILAGO, *Lin.*)*Lin. Syst.* SYNGENESIA SUPERFLUA.

GENERIC CHARACTER.—Involucrum simple; the scales membranous | maphrodite, or hermaphrodite in the centre, female in the ray. Receptacle naked. Pappus hairy. (*Dec.*)

DESCRIPTION, &c.—The common Colt's-foot (*T. Farfara*) is a well-known weed, with a remarkably handsome leaf and golden-yellow flowers. The plant might be almost considered ornamental, if it were not generally known to be an indication of a moist, clayey soil, which is generally considered worse than any other for agricultural purposes. It is also a plant which it is very difficult to eradicate, on account of its creeping, underground stem, which spreads rapidly, branching in every direction. The Butter-bur (*T. Petasites*) is very common on the banks of rivers, where it spreads rapidly in the same manner as the common Colt's-foot. The leaves also resemble those of that plant, but are much larger, and, indeed, considerably exceed in size those of every other British plant. The flowers are of a pale lilac, and are quite different in shape from those of the common Colt's-foot, forming an erect spike from three to six inches long. Both the species are perennials flowering in March and April. The name of *Tussilago* is from *tussis*, a cough; because the common Colt's-foot, abounding in mucilage, is said to form an excellent medicine to allay any irritation of the air-passages. The genus is placed in the same Linnæan class and order as the last.

GENUS XIV.

THE CINERARIA. (CINERARIA, *Lin.*)*Lin. Syst.* SYNGENESIA SUPERFLUA.

GENERIC CHARACTER.—Involucrum simple, many-leaved, equal. Flowers radiant. Receptacle naked. Pappus hairy. (*Dec.*)

DESCRIPTION, &c.—The commonest species of this genus, viz. the Marsh Flea-wort (*C. palustris*), is almost confined to the fenny districts of Norfolk and Cambridgeshire. It is a coarse, strong-growing plant, with a thick, tubular, hollow stem, and rather small yellow flowers, which it produces in June and July. The other species (*C. campestris*) produces its rather pretty yellow flowers in May and June. It is a perennial, and is very common on the chalky pastures in the middle and the south of England. *Cineraria* is from the Latin word *cineres*, ashes, in allusion to the mealiness of the leaves. The genus is in the same Linnæan class and order as the last. The greenhouse species of *Cineraria* are not natives of Britain.

GENUS XV.

THE DAISY. (BELLIS, *Lin.*)*Lin. Syst.* SYNGENESIA SUPERFLUA.

GENERIC CHARACTER.—Involucrum hemispherical, many-leaved, simple; scales lanceolate. Flowers radiant. Receptacle naked, conical. Pappus none. (*Lindley.*)

DESCRIPTION, &c.—The common Daisy (*B. perennis*) is the only British species; and, as is well known, it is common everywhere, and continues in flower from March till November. The name of Daisy is said to

be a corruption of Day's eye, in allusion to the flower being so abundant as to be seen wherever there was light; or, in other words, the eye of day. The word *Bellis* is taken from *bellus*, pretty.

GENUS XVI.

THE CHRYSANTHEMUM. (CHRYSANTHEMUM, *Lin.*)

Lin. Syst. SYNGENESIA SUPERFLUA.

GENERIC CHARACTER.—Involucrum hemispherical, imbricated; scales scarious at the margin. Flowers radiant. Receptacle naked. Pappus none, or a short membrane. (*Lindley.*)

DESCRIPTION, &c.—This is a well-known and very handsome genus; as well for the beautiful Chinese species cultivated in our gardens and greenhouses, as for the scarcely less beautiful kinds found in our fields. The name of *Chrysanthemum* signifies literally golden flower, and must, therefore, have been first applied to one of the yellow kinds. The genus is in the same Linnaean class and order as the preceding one.

* *Rays white.*

1.—THE GREAT WHITE OX-EYE, OR MOON DAISY. (CHRYSANTHEMUM LEUCANTHEMUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 601; 2nd ed., t. 1171; and our *fig. 2*, in Pl. 42.

SPECIFIC CHARACTER.—Leaves clasping the stem, oblong, obtuse, cut; pinnatifid at the base; radical ones obovate, stalked. (*Smith.*)

DESCRIPTION, &c.—This very handsome plant is common in every part of England, growing by the roadside, in corn-fields, or in other cultivated land through which there is a path; but it will only grow in dry and somewhat rich soil. It is a perennial, and produces its large handsome flowers in June and July.

2.—THE FEVERFEW. (CHRYSANTHEMUM PARTHENIUM, *Lindl.*)

SYNONYMES.—*Pyrethrum Parthenium*, *Smith*; *Matricaria Parthenium*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 1231; 2nd ed., t. 1173.

SPECIFIC CHARACTER.—Leaves stalked, compound, flat; leaflets ovate, cut; the uppermost confluent. Flower-stalks corymbose. Stem erect. Rays shorter than the diameter of the disk. (*Smith.*)

DESCRIPTION, &c.—The Feverfew was formerly found in almost every garden, as it was reckoned an almost infallible remedy against the ague, a disease with which our ancestors appear to have been much more frequently troubled than we are at the present day. The Feverfew is very bitter when tasted, and smells strongly; but in other respects it well deserves a place in every garden. The plant is a biennial, and produces its flowers in June and July.

3.—THE MAYWEED. (CHRYSANTHEMUM INODORUM, *Lin.*)

SYNONYMES.—*Pyrethrum inodorum*, *Smith*; *Matricaria inodora*, *Lin.*; *Corn Feverfew*; *Scentless Mayweed*.

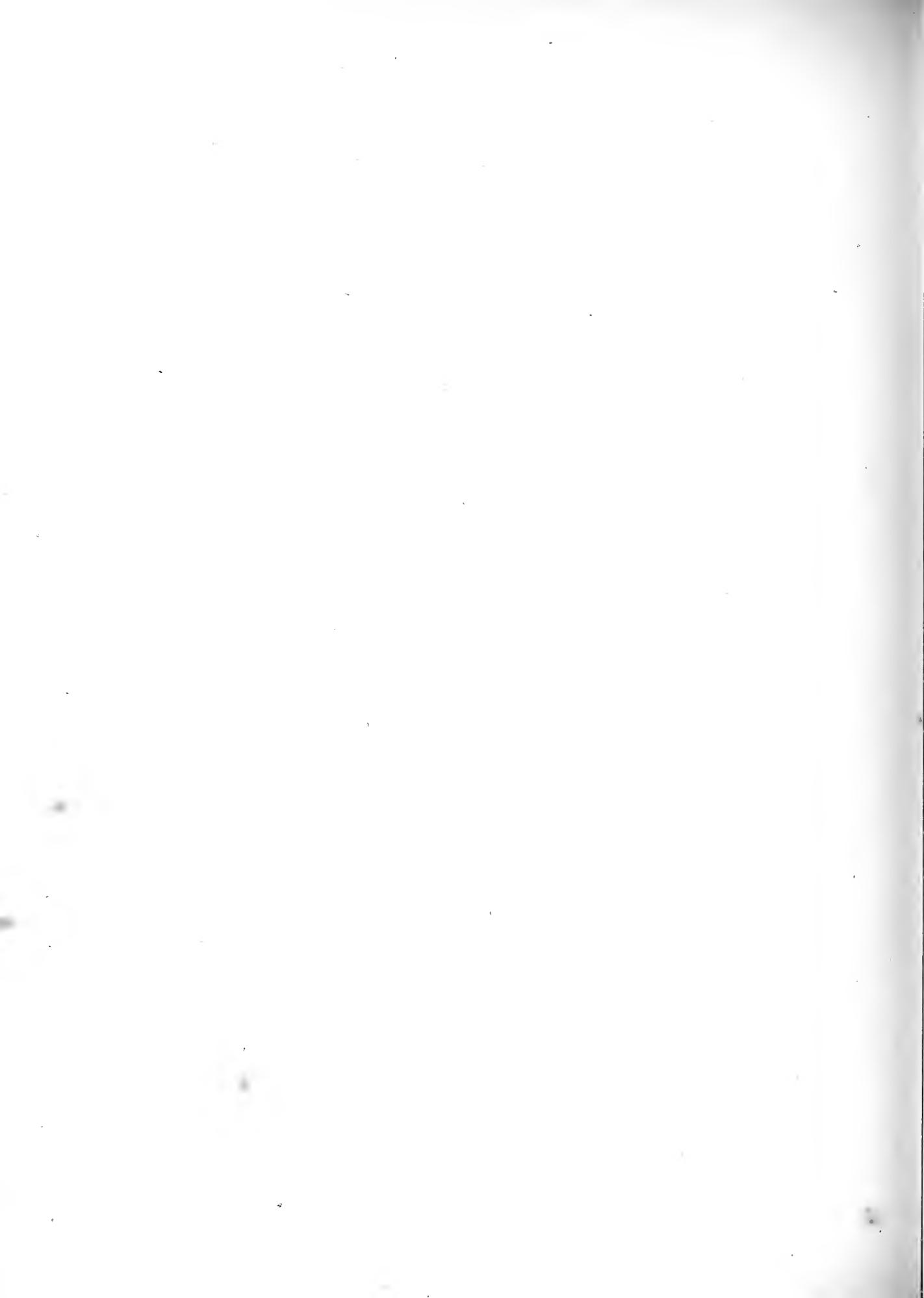
ENGRAVINGS.—Eng. Bot., t. 676; 2nd ed., t. 1174.

SPECIFIC CHARACTER.—Leaves sessile, pinnate, in numerous, capillary, pointed segments. Stem branched, spreading. Pappus entire. (*Lindley.*)

DESCRIPTION, &c.—This species is very distinct from the common Feverfew, not only from the largeness of its flowers, but from the great length of the florets of the ray and the conical disk. The leaves are particularly beautiful in this species, from their hair-like segments. The plant is an annual, and flowers in August and September. The Sea-side Feverfew (*C. maritimum*) is probably only a variety of this species.



1 Marsh Ragwort 2 Great White Ox-eye or Moon Daisy 3 Ox-eye Chamomile 4 Common
 Yarrow, or Milfoil 5 Black Knapweed 6 Musk Thistle 7 Orange Hawkweed 8 Yellow Hawkweed
 Goat's-beard 9 Wild Succory.



* * *Rays yellow.*

4.—THE YELLOW OX-EYE, OR CORN MARIGOLD, (*CHRYSANTHEMUM SEGETUM*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 540; 2nd ed., t. 1172.

SPECIFIC CHARACTER.—Leaves clasping the stem, glaucous; jagged upwards; toothed at the base. (*Smith.*)

DESCRIPTION, &c.—This very handsome plant is an annual, growing in corn-fields, particularly where the soil is sandy; and it produces its showy flowers from June till the end of August. In some places it is so abundant as to be considered a troublesome weed.

GENUS XVII.

THE WILD CHAMOMILE. (*MATRICARIA*, *Lin.*)

Lin. Syst. SYNGENESIA SUPERFLUA.

GENERIC CHARACTER.—Involucrum hemispherical, imbricated; scales obtuse. Flowers radiant. Receptacle naked, conical. Pappus none. (*Lindley.*)

DESCRIPTION, &c.—The genus *Matricaria* formerly included many English plants, but it is now restricted to one. The name of the genus alludes to the supposed medicinal properties of the wild Chamomile (*M. Chamomilla*). It is an annual, and produces its flowers, which are remarkable for their conical disks, from May till July.

GENUS XVIII.

THE WORMWOOD. (*ARTEMISIA*, *Lin.*)

Lin. Syst. SYNGENESIA SUPERFLUA.

GENERIC CHARACTER.—Involucrum ovate or round, imbricated. | slender, less numerous, entire, female. Receptacle naked or hairy. Florets all tubular; of the disk hermaphrodite, five-toothed; of the ray | Pappus none. (*Lindley.*)

DESCRIPTION, &c.—The common Wormwood (*A. Absinthium*) is a well-known half-shrubby plant, with a strong smell, and a very bitter taste. It is considered an admirable stomachic, and a liqueur composed of it is in great esteem on the Continent. The flowers are so intensely bitter that they are frequently used in the country to put in beer instead of hops. The leaves are put among linen to drive away moths. The Mugwort (*A. vulgaris*) is a perennial, very common in many parts of England, which produces its reddish-purple flowers in August. The down on the leaves of this plant is so abundant that it is collected, under the name of *mora*, and used as tinder. There are some other British species in the genus, but they do not possess any interest. The name of *Artemisia* is derived from *Artemis*, the Diana of the Greeks. The common Southernwood belongs to this genus, but it is not a native of Britain.

GENUS XIX.

THE TANSY. (*TANACETUM*, *Lin.*)

Lin. Syst. SYNGENESIA SUPERFLUA.

GENERIC CHARACTER.—Involucrum hemispherical, imbricated. | female, three-lobed. Receptacle naked. Pappus membranous, entire. Florets all tubular; of the disk hermaphrodite, five-lobed; of the ray | (*Lindley.*)

DESCRIPTION, &c.—There is only one British species in this genus. The name of *Tanacetum* is said to be derived from *athanasia*, signifying undying; in allusion to the imperishable nature of the plant, which, even when gathered, does not quickly fade.

1.—THE COMMON TANSY. (*TANACETUM VULGARE, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1229; 2nd ed., t. 1130.

SPECIFIC CHARACTER.—Leaves doubly pinnatifid, deeply serrated, naked. (*Smith.*)

DESCRIPTION, &c.—The common Tansy was formerly in high repute, both in the kitchen and as a domestic medicine, though it is now seldom used in either case. Country people, however, continue to have great faith in it as a cure for worms; and Tansy-pudding is, I believe, still one of the standard dishes at the Lord Mayor's feast. The plant is also used in vinegar, as a kind of sauce; and pancakes made of it are eaten in the Highlands of Scotland, in spring, as a purifier of the blood. The taste of the herb is intensely bitter; it has a very strong smell, and its qualities are cordial and tonic. It is found in every part of Great Britain, but it grows most abundantly on sandy and calcareous soils. It is a perennial, and it flowers in July and August.

GENUS XX.

THE COTTON-WEED. (*DIOTIS, Desfontaines.*)*Lin. Syst. SYNGENESIA AEQUALIS.*

GENERIC CHARACTER.—Involucrum hemispherical, imbricated. Florets all tubular, hermaphrodite, five-toothed, contracted in the middle, auricled or saccate on each side at the base. Receptacle convex, paleaceous. Pappus none; in its place the fruit is crowned by the persistent lower two-eared half of the corolla. (*Lindley.*)

DESCRIPTION, &c.—The only British plant belonging to this genus is the Sea-side Cotton-weed (*D. maritima*). This very curious plant is found only on the sea-side of the southern and eastern counties of England, where its singular appearance attracts the eye. The leaves and stem are entirely covered with a snow-white cotton-like down. The flowers are yellow, and corymbose. The whole plant is extremely brittle, and its thick fleshy leaves have a strong aromatic smell, and bitter taste. This plant appears to have occasioned a good deal of trouble to botanists, as it was placed first in the genus *Santolina*, then in *Filago*, then in *Athanasia*, and afterwards in *Otanthus*, before it was finally settled in *Diotis*. The name of *Diotis* signifies two-eared, in allusion to two appendages, which supply the place of the pappus.

GENUS XXI.

THE CHAMOMILE. (*ANTHEMIS, Lin.*)*Lin. Syst. SYNGENESIA SUPERFLUA.*

GENERIC CHARACTER.—Involucrum hemispherical; scales nearly equal, scarious at the margin, imbricated. Flowers radiant; of the disk hermaphrodite; of the ray lanceolate, female. Receptacle conical, paleaceous. Pappus a membrane. (*Lindley.*)

DESCRIPTION, &c.—The genus Chamomile contains several well-known plants which are common in every part of Britain. They are all herbaceous plants, with alternate divided leaves, and daisy-like flowers. They have generally a strong smell, and an intensely bitter taste. The genus is placed in the Linnæan class and order Syngenesia Superflua. The name of *Anthemis* is derived from the Greek word for a flower, in allusion to the great profusion of flowers borne by all the kinds of Chamomile.

* *Rays white.*

1.—THE COMMON CHAMOMILE. (*ANTHEMIS NOBILIS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 980; 2nd ed., t. 1178. | acute, a little downy. Stem procumbent. Paleæ membranous, SPECIFIC CHARACTER.—Leaves doubly pinnate, semicylindrical, | obtuse, shorter than the florets. (*Lindley.*)

DESCRIPTION, &c.—The common Chamomile is abundant in dry, gravelly, or sandy soils in every part of Great Britain; and it is easily known, even when not in flower, by its growing in tufts or patches, which are formed by the stem spreading over the surface of the ground, and rooting in different directions. The plant, though intensely bitter, has an agreeable aromatic flavour, and it is still used in medicine as a tonic and stomachic, as well as for fomentations. The Chamomile flowers sold in the shops are, however, of the cultivated or double variety, and are much weaker in their qualities than those of the wild plant. The species is a perennial, and it flowers in August and September.

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THE SEA CHAMOMILE. (*A. MARITIMA*, *Lin.*)

This is an annual plant, which produces its daisy-like flowers in July; and it has been remarked of it, that its flowers smell like those of the Tansy, while its leaves resemble Wormwood. It is only found in Durham and some parts of Northumberland; and even there it is by no means common. The stems are prostrate, and covered with a whitish down.

THE CORN CHAMOMILE. (*A. ARVENSIS*, *Lin.*)

This plant is common in corn-fields on gravelly soils. The whole plant is covered with a whitish down; the stems grow nearly a foot high, and each terminates in a large flower, with a flat yellow disk, and broad drooping white rays. The plant is a biennial, and it flowers in June and July.

THE STINKING CHAMOMILE, OR MAYWEED. (*A. COTULA*, *Lin.*, *MARUTA FETIDA*, *Cass.*)

This plant has a powerful and very disagreeable smell, and an acrid taste. It is common everywhere; it is an annual, and flowers in July and August.

\*\* *Rays yellow like the disk.*

2.—THE OX-EYE CHAMOMILE. (*ANTHEMIS TINCTORIA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1472; 2nd ed., t. 1181; and our fig. | beneath. Stem corymbose, erect. Pappus membranous, undivided. 3, in Pl. 42. (*Lindley.*)

SPECIFIC CHARACTER.—Leaves doubly pinnatifid, serrated; downy

DESCRIPTION, &c.—This species is rather rare, as it is only found in stony mountainous places. The stem is cottony, and the florets are all of a bright golden-yellow. It is a biennial, and it flowers in July and August.

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GENUS XXII.

THE YARROW. (*ACHILLEA*, *Lin.*)

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*Lin. Syst. SYNGENESIA SUPERFLUA.*

GENERIC CHARACTER.—Involucrum ovate, imbricated. Flowers radiant; of the disk hermaphrodite, of the ray short, female, and few. Receptacle narrow, flat, paleaceous. Pappus none. (*Lindley.*)

DESCRIPTION, &c.—All the species belonging to this genus are herbaceous plants, with alternate pinnatifid

leaves, and corymbose flowers. The name of *Achillea* is said to be given to this genus in consequence of the healing virtues possessed by some of the species having been first discovered by Achilles.

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1.—THE COMMON YARROW, OR MILFOIL. (*ACHILLEA MILLEFOLIUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 758 ; 2nd ed., t. 1184 ; and our *fig.* 4, in Pl. 42.

SPECIFIC CHARACTER.—Leaves doubly pinnatifid, hairy ; segments linear, toothed, pointed. Stem furrowed. (*Smith.*)

DESCRIPTION, &c.—This plant is common in every part of Great Britain, particularly on road sides and the banks of hedges, where it spreads rapidly from its creeping underground stem. The plant is astringent, and it was formerly in high repute for healing wounds. It is a perennial, and flowers all the summer.

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THE SNEEZE-WORT, OR GOOSE-TONGUE. (*A. PTARMICA, Lin.*)

This plant is a perennial, which is found abundantly in moist meadows and pastures, where it produces its flat corymbs of white flowers in July and August. The leaves, having a pungent odour, are sometimes used as a substitute for snuff ; and hence the English name of Sneeze-wort. The juice of the whole plant is acrid.

THE GOLDEN YARROW. (*A. TOMENTOSA, Lin.*)

This plant is only found in dry hilly pastures in Scotland and Ireland. It is a perennial, with a very downy stem, which seldom grows above six or eight inches high, and it continues producing its golden-yellow flowers all the summer and autumn.

There is another species of this genus (*A. serrata*) which has been only found near Matlock, and which closely resembles *A. Ptarmica*, except that its leaves are more deeply serrated, and its flowers are of a pale yellow or buff-colour, instead of being white.

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GENUS XXIII.

THE BUR-WEED. (*XANTHIUM, Lin.*)

*Lin. Syst. MONOECIA PENTANDRIA.*

GENERIC CHARACTER.—Monoecious.—Male. Involucrum many-leaved, many-flowered. Florets all tubular. Receptacle paleaceous.—Female. Involucrum one-leaved, prickly, containing 2 florets. Fruit inclosed in the hard indurated involucrum. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species of this very curious genus, viz. the Common Bur-weed (*X. strumarium, Lin.*), and this has only been found on dung-hills, or in other rank moist soils, in the immediate neighbourhood of London. The flowers are very curious, and they are surrounded by prickly involucres, which become a part of the seed-vessel when it is ripe, and cause it to adhere to the clothes, like a bur ; and hence the popular name. The plant is an annual, and flowers in August and September. The name of *Xanthium* is derived from a Greek word signifying yellow, because an infusion of the leaves was used to give a golden hue to the hair. The genus is placed in the Linnaean class Monoecia, because the male and female flowers are distinct ; and in the order Pentandria, on account of its five stamens.

## GENUS XXIV.

THE BUR-MARIGOLD. (BIDENS, *Lin.*)*Lin. Syst.* SYNGENESIA *ÆQUALIS*.

GENERIC CHARACTER.—Involucrum with bracteolæ at the base; outer scales longer than the rest, and spreading. Flowers mostly floscular; florets all hermaphrodite, or if ligulate in the ray, then female, | or hermaphrodite. Receptacle flat, paleaceous. Pappus from two to five persistent awns. (*Lindley.*)

DESCRIPTION, &c.—There are only two British species belonging to this genus, and both are annual plants, producing their bright yellow flowers in August and September. The plants are extremely acrid, and they are found abundantly in ditches and other moist places in various parts of England. The name of *Bidens* is derived from *bis*, double, and *dens*, a tooth; in allusion to the two teeth which crown the fruit.

## II.—THE THISTLE TRIBE.

Ray none. Involucre conical and rigid.

## GENUS XXV.

THE COTTON-THISTLE. (ONOPORDUM, *Lin.*)*Lin. Syst.* SYNGENESIA *ÆQUALIS*.

GENERIC CHARACTER.—Involucrum imbricated; scales pungent. Receptacle excavated like honey-comb. Fruit compressed, four-cornered, furrowed transversely. Pappus hairy, deciduous; its hairs connected in a ring at the base. (*Lindley.*)

DESCRIPTION, &c.—There is but one species in this genus (*O. Acanthium*, *Lin.*); and this plant, which is very common on road-sides and hedge-banks wherever the soil is gravelly, is supposed by some botanists to be the true Scotch Thistle. It is easily known from the other kinds of thistle by the shape of its flowers; the involucrum forming one large ball, and the head of flowers a smaller ball fixed on the top of the other. The florets are purple. The leaves are covered on both sides with a dense cottony web, which renders them quite white, but which is easily detached by rubbing it with the finger. The receptacle is very succulent, and it was formerly used for food like that of the Artichoke, though it is easily distinguished from that plant by the part vulgarly called the choke, consisting of much broader scales, and being so arranged as to form a kind of honey-comb; this peculiarity being, in fact, the distinctive mark of the genus. The seeds of this plant contain an immense proportion of oil, and birds are remarkably fond of them. The plant is a biennial, and it flowers in August.

## GENUS XXVI.

THE SAUSSUREA. (SAUSSUREA, *Dec.*)*Lin. Syst.* SYNGENESIA *ÆQUALIS*.

GENERIC CHARACTER. Involucrum imbricated; scales unarmed. Florets all hermaphrodite. Receptacle paleaceous. Pappus in two rows, hairy; the outer hairs short, with minute notches; the inner long and feathery. (*Dec.*)

DESCRIPTION, &c.—There is only one species in this genus, and even that was formerly included in *Serratula*, from which it has been separated on account of the slight difference in the pappus and in the anthers. The plant

is found on moist alpine rocks in Wales and Scotland, and it grows about six or eight inches high. The flowers are purple; and the leaves, which are lanceolate and undivided, are downy beneath. The plant is a perennial, and it flowers in August. The name of *Saussurea* is given to this plant in honour of two botanists (father and son) named Saussure.

### GENUS XXVII.

#### THE PLUME-THISTLE. (CNICUS, *Lin.*)

*Lin. Syst.* SYNGENESIA AEQUALIS.

**GENERIC CHARACTER.**—Involucrum ovate, imbricated; scales spiny at the points. Florcts all hermaphrodite. Style equal, simple. Receptacle paleaceous; palea split into bristle-shaped segments. Pappus feathery; hairs collected into a ring at the base. (*Lindley.*)

**DESCRIPTION, &c.**—This is rather an extensive genus of plants, all of which are herbaceous, and most of them spiny. They were formerly included in the genus *Carduus*, but have been separated on account of their pappus being feathery instead of hairy. The name of *Cnicus* is derived from a Greek word, signifying to prick or wound.

\* Leaves decurrent. Stem winged.

#### 1.—THE SPEAR PLUME-THISTLE. (CNICUS LANCEOLATUS, *Willd.*)

**SYNONYMES.**—*Cirsium lanceolatum*, *Scopoli*; *Eriolpis lanceolata*, *Cassini*; *Carduus lanceolatus*, *Lin.*

**ENGRAVINGS.**—Eng. Bot., t. 107; 2nd ed., t. 1115.

**SPECIFIC CHARACTER.**—Leaves decurrent, pinnatifid, hispid, with variously-spreading spinous lobes. Involucrum ovate, shaggy. Stem furrowed, hairy. (*Lindley.*)

**DESCRIPTION, &c.**—This is one of the most common kinds of Thistle, as it is one of the handsomest. The stem grows about three or four feet high. The leaves are large, dark green above, and covered with a cottony web beneath. They are also armed with strong spines. The flowers are large and purple, and they are produced singly. The plant is a biennial, and its flowers expand in July and August.

#### THE MARSH PLUME-THISTLE. (C. PALUSTRIS, *Willd.*)

This plant is very common in marshy meadows, where it grows from three to six feet in height, and flowers in July. The flowers are either of a deep purple, or white; and the plant is either an annual or a biennial.

\*\* Leaves sessile, or partially decurrent. Stem not winged.

#### 2.—THE DWARF PLUME-THISTLE. (CNICUS ACAULIS, *Willd.*)

**SYNONYMES.**—*Cirsium acaule*, *Allioni*; *Onopordum acaulism*, *Cassini*; *Carduus acaulis*, *Lin.*

**ENGRAVINGS.**—Eng. Bot., t. 161; 2nd ed., t. 1122.

**SPECIFIC CHARACTER.**—Stalks radical, single-headed, shorter than the smooth involucrum. (*Lindley.*)

**DESCRIPTION, &c.**—This is a very common and troublesome weed in many parts of England where the soil is dry. The root is very woody, and the leaves spread close to the ground, so as to form a circle. The plant is a perennial, and it produces its reddish-purple flowers in July.

#### THE CREEPING PLUME-THISTLE. (C. ARVENSIS, *Smith.*)

This is a very frequent and troublesome weed, which it is extremely difficult to eradicate, on account of its widely-spreading underground stems. The florets are of a pale purple or whitish. The plant is a perennial, and it flowers in July.

## THE WOOLLY-HEADED PLUME-THISTLE. (C. ERIOPHORUS, Willd.)

This is a very strong-growing robust species, which is found on the roadsides, and in waste places on the chalk and lime-stone districts. It is a biennial, and produces its large heads of purple flowers in July and August.

There are several other species of this genus, but they bear so much resemblance to each other as to seem not to require any separate description.

## GENUS XXVIII.

## THE CARLINE THISTLE. (CARLINA, Lin.)

*Lin. Syst. SYNGENESIA AEQUALIS.*

GENERIC CHARACTER.—Involucrum imbricated; the outer scales and resembling radiant florets. Receptacle paleaceous; paleæ split sinuated, spiny, spreading at the points; the inner generally simple into bristle-like segments. Pappus feathery. (Dec.) and acute; the innermost much longer, scarious, ligulate, coloured,

DESCRIPTION, &c.—There is only one British species in this genus (*C. vulgaris*); a curious-looking plant, with yellow flowers, so closely resembling in their texture those flowers called Everlasting, as to be frequently mistaken for them. The Carline Thistle is a biennial, and flowers in June and July. It is common on dry, sandy, or chalky soils, and it is generally found growing under the shelter of heath or furze. The name of *Carlina* is a diminutive of Charles; and it is said to have been given to this plant in honour of Charlemagne, to whom an angel pointed out one of the species, telling him that it would cure his army of the plague.

## GENUS XXIX.

## THE BURDOCK. (LAPPA, Tourn.)

*Lin. Syst. SYNGENESIA AEQUALIS.*

GENERIC CHARACTER.—Involucrum imbricated; scales ending in a soft spine hooked at the end. Receptacle paleaceous. Pappus short, persistent, with rigid, unequal hairs. (Dec.)

DESCRIPTION, &c.—There are only two British species of this genus, or, according to some botanists, only one, as the other kind appears to be only a variety. The common Burdock, or Clot-Bur (*L. glabra*) is common in neglected meadows, and on road-sides in every part of Great Britain; and it is well known, not for the beauty of its flowers, but for its curious seed-vessels, which are so closely covered with hooked scales, that they stick to everything that touches them. The plant is a biennial, and it flowers in July and August. *Lappa* has the same signification as the English name.

## GENUS XXX.

## THE MILK THISTLE. (SILYBUM, Vaillant.)

*Lin. Syst. SYNGENESIA AEQUALIS.*

GENERIC CHARACTER.—Involucrum imbricated; scales leafy at the base, closely pressing upon each other, spreading and spiny at the points. Receptacle paleaceous. Pappus between hairy and paleaceous, deciduous; the hairs connected in a ring at the base. (Lindley.)

DESCRIPTION, &c.—The only species of this genus which is a native of Britain is *S. Marianum*, the common Milk Thistle, which is sometimes also called Our Lady's Thistle or the Holy Thistle. The flowers are

purple, like those of some of the other species; but this plant is easily distinguished by the long spines of its involucre, and by its leaves appearing blotched with white, as though milk had been spilt on them.

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### GENUS XXXI.

#### THE SAW-WORT. (SERRATULA, *Lin.*)

*Lin. Syst.* SYNGENESIA AEQUALIS.

GENERIC CHARACTER.—Diœcious. Involucrum imbricated; scales unarmed, acute. Receptacle paleaceous; the paleæ split into numerous linear bristles. Pappus persistent, with rigid unequal hairs. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species belonging to this genus, viz. the common Saw-wort (*S. tinctoria*, *Lin.*), which is a perennial plant, producing its flowers in July and August. The genus takes its names of *Serratula* and Saw-Wort from the deep serratures of its leaves; and the specific name of the species, *tinctoria*, alludes to the juice of the plant being occasionally used to dye yellow.

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### GENUS XXXII.

#### THE CENTAUREA. (CENTAUREA, *Lin.*)

*Lin. Syst.* SYNGENESIA FRUSTRANEA.

GENERIC CHARACTER.—Involucrum imbricated; scales leafy, scarious, or spiny in various ways. Florets of the disk hermaphrodite; of the ray neuter and larger than the others. Receptacle paleaceous; paleæ jagged. Fruit inserted obliquely at the base. Pappus hairy. (*Lindley.*)

DESCRIPTION, &c.—This is a very extensive genus, varying exceedingly in the form, colour, and habit of growth of the plants, but agreeing in their qualities, which are all bitter and tonic. The name of *Centaurea* is said to be derived from the Centaur Chiron, the preceptor of Achilles, who used it for curing wounds. The genus is placed in the Linnaean class and order Syngenesia Frustranea, because the florets of the ray have neither stamens nor pistils.

\* *Scales of involucrum jagged or fringed.*

#### 1.—THE BLACK KNAPWEED. (CENTAUREA NIGRA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 278; 2nd ed., t. 1187; and our *fig.* 5, in Pl. 42. upright capillary teeth. Lower leaves somewhat lyrate, with angular lobes; upper ones ovate. Flowers discoid. (*Lindley.*)

SPECIFIC CHARACTER.—Scales of involucrum oval, fringed with

DESCRIPTION, &c.—This species is common in meadows and pastures, and on road-sides in every part of Great Britain; and it is distinguished from the other species of Knapweed by the scales of the involuerum being black. It is a perennial plant, and flowers from June till September.

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#### 2.—THE CORN BLUE-BOTTLE. (CENTAUREA CYANUS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 277; 2nd ed., t. 1188.

SPECIFIC CHARACTER.—Scales of involucrum serrated. Leaves linear-lanceolate, entire; lower ones toothed towards their base. (*Lindley.*)

DESCRIPTION, &c.—This beautiful plant is one of the common weeds of almost every corn-field, and is, of course, generally well known. It is an annual, and it produces its brilliant blue flowers in July and August.

THE BROWN KNAPWEED. (C. JACEA, *Lin.*)

This is a very handsome species, with purple flowers, the florets of which are spreading instead of being compressed so as to form a close head. It is a very local species, being only found in Sussex, and in one or two places in Scotland and Ireland. The plant is a perennial, and it flowers in August and September.

THE GREATER KNAPWEED. (C. SCABIOSA, *Lin.*)

This species is tolerably common throughout the kingdom, but it is most abundant in chalky soils. The flowers are large and purple, closely resembling those of *C. Jacea*. The plant is a perennial, and it flowers in July and August.

\* \* *Scales of involucrum palmate or pinnate, and spinous.*

THE JERSEY STAR-THISTLE. (C. ISNARDI, *Lin.*)

This plant is only found in Jersey. It is a perennial of no beauty, which produces its pale purple flowers in July and August.

THE COMMON STAR-THISTLE. (C. CALCITRAPA, *Lin.*)

This species has pinkish flowers, and long spines to the involucre, disposed so as to form a star. It is found in various parts of England, but principally on the road-sides in the middle and southern counties. It is an annual, and flowers from July till September.

ST. BARNABY'S THISTLE. (C. SOLSTITIALIS, *Lin.*)

This species has yellow flowers, which generally appear about St. Barnaby's day, and hence the name. The plant is an annual, and as it is only found in the southern and eastern counties of England, it is supposed to be an importation from the Continent.

## GENUS XXXIII.

THE THISTLE. (CARDUUS, *Lin.*)

*Lin. Syst. SYNGENESIA AEQUALIS.*

GENERIC CHARACTER.—Involucrum imbricated; scales simple, spiny at the points. Receptacle paleaceous; the paleæ split into numerous linear bristles. Pappus deciduous, hairy; the hairs collected into a ring at the base. (Dec.)

DESCRIPTION, &c.—This genus formerly included all the Thistles, but it is now confined to very narrow limits, only containing three or four British species. The name of *Carduus* signifies a point, in allusion to the sharp points found on the involucre of most of the species.

1.—THE MUSK THISTLE. (CARDUUS NUTANS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1112; 2nd ed., t. 1111; and our fig. 6, in Pl. 42. Heads solitary, drooping. Scales of involucrum lanceolate; their upper part spreading. (Lindley.)

SPECIFIC CHARACTER.—Leaves interrupted, decurrent, spinous.

DESCRIPTION, &c.—This is one of the commonest of the Thistles, as it is found on waste ground in every part of the kingdom, but most abundantly in chalky soils. The stem grows two or three feet high, and the flowers, which are produced in great abundance, have a powerful scent of musk in the evening. The plant is either an annual or a biennial, and it flowers in July and August.

THE WELTED THISTLE. (C. ACANTHOIDES, *Lin.*)

This species is very common in every part of Great Britain, and some botanists suppose it to be the national Thistle of Scotland, while others give that honour to the Milk Thistle, which is certainly a much handsomer plant, though it is more rare in Scotland. This species is very abundant in that country, and it has been known in some cases to attain the height of eight feet.

THE SLENDER-FLOWERED THISTLE. (C. TENUIFLORUS, *Curtis.*)

This plant is common in various parts of England, particularly on sandy soils. It is an annual, and produces its small heads of flowers in June and July.

## III.—THE SUCCORY TRIBE.

Florets all ligulate and hermaphrodite. Receptacle scarcely fleshy.—Sap generally milky.

## GENUS XXXIV.

THE SOW-THISTLE. (SONCHUS, *Lin.*)*Lin. Syst.* SYNGENESIA ÆQUALIS.

GENERIC CHARACTER.—Involucrum oblong, imbricated, ovate at the base. Receptacle naked. Fruit striated longitudinally. Pappus short, sessile, hairy. (Dec.)

DESCRIPTION, &c.—This genus contains some of the commonest and most troublesome of the British weeds. The common Sow-Thistle (*S. oleraceus*) is particularly troublesome, as it continues flowering all the summer, and, of course, is continually ripening and scattering its seeds. The plant is an annual, and the stem abounds in a milky juice. There are many varieties of this species, and three other species which are considered distinct. Two of these have yellow flowers; but the flowers of the third (*S. alpinus*) are blue. The name of *Sonchus* is derived from a Greek word, signifying soft; in allusion to the pliability of the stems.

## GENUS XXXV.

THE LETTUCE. (LACTUCA, *Lin.*)*Lin. Syst.* SYNGENESIA ÆQUALIS.

GENERIC CHARACTER.—Involucrum oblong, imbricated; scales membranous at the margin. Receptacle naked. Pappus stipitate, hairy, soft, fugacious. (Dec.)

DESCRIPTION, &c.—The Wild Lettuce (*L. virosa*) bears considerable resemblance when in flower to the Sow-Thistle, but its stem is much more slender. It is a biennial, and it produces its small yellow flowers in August. This plant is very common on hedge banks and other waste places in various parts of England, particularly on clayey soils. The whole plant abounds in a milky juice, which has the same qualities as opium, and is frequently used instead of it. There are three other species, but they are comparatively rare, with the exception of the Wall Lettuce (*L. muralis*), which is frequently found growing on old walls. The name of *Lactuca* is derived from *lac*, milk; in allusion to the abundance of milky juice found in all the plants belonging to the genus.

## GENUS XXXVI.

THE NIPPLE-WORT. (LAPSANA, *Lin.*)*Lin. Syst.* SYNGENESIA AEQUALIS.

GENERIC CHARACTER.—Involucrum with external bracteolæ; scales linear-lanceolate. Receptacle naked. Fruit quickly deciduous, not enveloped in the scales of the involucrum. Pappus none. (*Lindley.*)

DESCRIPTION, &c.—There are only two British species in this genus, viz. the common Nipple-Wort (*L. communis*, *Lin.*), and the Swine's Succory (*L. pusilla*, *Willd.*). Both are annual weeds, with yellow flowers, which are produced in June and July.

## GENUS XXXVII.

THE DANDELION. (LEONTODON, *Lin.*)*Lin. Syst.* SYNGENESIA AEQUALIS.

GENERIC CHARACTER.—Involucrum with short, external, spreading bracteolæ; not ribbed when in fruit. Receptacle naked. Pappus stipitate, hairy.—Scares always single-flowered. (*Lindley.*)

DESCRIPTION, &c.—The common Dandelion (*L. Taraxacum*, *Lin.*) is a well-known British weed, remarkable for its curious leaves, the indentations of which are reversed, its beautiful yellow flowers, and its large heads of feathery seeds. There is another species, which closely resembles the common kind, but which is less abundant, being only found in marsh land. The name of *Leontodon* signifies literally a lion's tooth; in allusion to the tooth-like margin of the leaves. The English name of Dandelion is a corruption of *Dent de Lion*, which is evidently derived from the scientific name.

## GENUS XXXVIII.

THE HAWK'S-BEARD. (CREPIS, *Lin.*)*Lin. Syst.* SYNGENESIA AEQUALIS.

GENERIC CHARACTER.—Involucrum lax, with external bracteolæ; when in fruit usually ribbed. Receptacle naked. Pappus hairy, sessile, or stipitate, snowy white. (*Dec.*)

DESCRIPTION, &c.—The species in this genus are small annual weeds, with yellow flowers, one of which has a very disagreeable smell, and is placed by some botanists in another genus, on account of its pappus being stipitate or stalked, like that of the Dandelion. The name of *Crepis* is said to be derived from a Greek word signifying a slipper, but why it is applied to this genus it does not appear.

The Bristly Ox-Tongue (*Helminthia echinoides*) and the Pieris (*Pieris hieracioides*) are two common English weeds, with flowers very nearly resembling those of *Crepis*. The Ox-Tongue takes its English name from the leaves and stem being covered with scattered prickles growing out of white tubercles, like the roughness of an ox's tongue, which are so sharp and so rigid as to render it very difficult to gather the plant. The botanic name of *Helminthia* is derived from two Greek words, one signifying a worm, and the other a case; in allusion to the shape of the seed-vessel. The Ox-Tongue was formerly included in the genus *Pieris*, but they have been separated on account of some slight botanical differences. The *Pieris*, though the whole plant is rough, is not so decidedly prickly as the Ox-Tongue. The name of *Pieris* signifies bitter.

## GENUS XXXIX.

THE HAWKWEED. (HIERACIUM, *Lin.*)*Lin. Syst.* SYNGENESIA AEQUALIS.

GENERIC CHARACTER.—Involucrum imbricated. Receptacle naked, or with a few short hairs. Pappus hairy, sessile, generally dirty brown. (*Dec.*)

DESCRIPTION, &c.—This is a very extensive genus, but the plants generally so closely resemble each other that it seems scarcely necessary to describe them in detail. I shall, therefore, only describe one species, which is very different from the rest. The English name of Hawkweed, and the botanic name of *Hieracium*, which is derived from the Greek word signifying a hawk, are both given to this genus in consequence of the juice of some of the species being used to strengthen the eye-sight, and as hawks are known to have remarkably keen sight, they were supposed anciently to feed on this herb.

1.—THE ORANGE HAWKWEED. (HIERACIUM AURANTIACUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1469; 2nd ed., t. 1085; and our *fig.* | leafless, hairy, densely corymbose, many-headed. Involucrum shaggy. 7, in Pl. 42. | (*Lindley.*)

SPECIFIC CHARACTER.—Leaves elliptic, acute, entire. Stalk almost

DESCRIPTION, &c.—This very curious plant is met with in woods in the north of England, and in Scotland, though it is said not to be truly a native of either country. It has been long cultivated in gardens, and is described by Gerard and other early writers as a garden flower under the odd name of Grim the collier, in allusion to the long black glandular hairs which cover the stem and involucre. The flowers are of a deep orange colour, and they grow like what is commonly called the Hen and Chickens Daisy, a number of smaller flowers surrounding and peeping from beneath a large one. The plant is a perennial, and it produces a succession of flowers all the summer.

There are eighteen other British species of Hawkweed, two of which (*H. pulmonarium* and *H. murorum*) are said to be very efficacious in diseases of the lungs.

## GENUS XL.

THE CAT'S-EAR. (HYPOTHÆRIS, *Lin.*)*Lin. Syst.* SYNGENESIA AEQUALIS.

GENERIC CHARACTER.—Involucrum oblong, imbricated. Receptacle paleaceous. Pappus stipitate, in two rows, of which the outer is setaceous and short, the inner feathery. (*Lindley.*)

DESCRIPTION, &c.—The common Cat's-Ear is a little annual weed, with very bitter milky juice, and small yellow flowers. The spotted Cat's-Ear (*H. maculata*, *Lin.*) and the long-rooted Cat's-Ear (*H. radicata*, *Lin.*) are placed by some botanists in another genus, called *Achyrophorus*. The first of these species has very curious spotted leaves, and the second a long fleshy root. Both are perennials, with large yellow flowers, which they produce in July. The name of *Hypothæris* is derived from two Greek words, signifying hog's food, because pigs are very fond of the root of *H. radicata*.

## GENUS XLI.

THE GOAT'S-BEARD. (TRAGOPOGON, *Lin.*)*Lin. Syst. SYNGENESIA AEQUALIS.*

GENERIC CHARACTER.—Involucrum simple, of eight or ten connected scales. Receptacle naked. Fruit striated longitudinally. Pappus feathery, with a slender stipe. (*Dec.*)

DESCRIPTION, &c.—There are two species of this curious flower, which are very unlike each other, but which are both interesting. The name of *Tragopogon* is derived from two Greek words, signifying goat's-beard; in allusion to the very beautiful feathery pappus of the fruit.

1.—THE YELLOW GOAT'S-BEARD. (TRAGOPOGON PRATENSIS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 434; 2nd ed., t. 1061; and our fig. 8, in Pl. 42. Leaves keeled, tapering; dilated and somewhat undulated at the base. Peduncle cylindrical. (*Lindley.*)

SPECIFIC CHARACTER.—Involucrum about equal to the florets.

DESCRIPTION, &c.—This very curious plant is frequently found in meadows and old pastures, and it is generally known in country places by the quaint name of Go-to-bed-at-noon, from its habit of opening its flowers at sunrise and closing them in the middle of the day. It is a biennial plant, and produces its large yellow flowers in June and July.

THE PURPLE GOAT'S-BEARD, OR SALSAFY. (T. PORRIFOLIUS, *Lin.*)

This is a biennial plant, found wild in moist meadows, but supposed not to be a true native. It was formerly cultivated in gardens for its long fleshy roots, which have a sweetish taste, something like those of the Parsnip, and are still occasionally to be purchased in Covent Garden market.

THE HAIRY THRINCIA. (THRINCIA HIRTA, *Roth.*)

This is a little British plant with yellow flowers, which is common on gravelly heaths, and flowers in July and August.

THE ROUGH HAWKBIT. (APARGIA HISPIDA, *Willd.*)

This species is so like the Dandelion, as to be frequently mistaken for it. There is, however, another species, which is called the Dandelion Hawkbit (*A. Taraxaci*), which does not bear the slightest resemblance to the Dandelion (except in its leaves, which are runcinate), as the whole plant is covered with a black pubescence.

THE AUTUMNAL HAWKBIT. (OPORINA AUTUMNALIS, *Don.*)

This bears so much resemblance to the Rough Hawkbit, as scarcely to be distinguishable from it, except by its leaves, which are not runcinate.

## GENUS XLII.

THE SUCCORY. (CICHORIUM, *Lin.*)*Lin. Syst. SYNGENESIA AEQUALIS.*

GENERIC CHARACTER.—Involucrum of eight scales, united at the base, and surrounded by five external bractæ. Receptacle naked, or rather hairy. Pappus sessile, scaly, shorter than the fruit. (*Dec.*)

DESCRIPTION, &c.—There is only one British species in this genus. The name of *Cichorium* is only slightly altered from the Arabic appellation of the genus.

1.—THE WILD SUCCORY. (*CICHORIUM INTYBUS, Lin.*)ENGRAVINGS.—Eng. Bot., t. 539; 2nd ed., t. 1106; and our *fig. 9*, in Pl. 42.SPECIFIC CHARACTER.—Heads in pairs, each nearly sessile. Leaves runcinate. (*Lindley.*)

DESCRIPTION, &c.—This very beautiful plant is found abundantly in sandy and chalky soils in different parts of England. Its flowers are generally of a most brilliant blue, but they are sometimes of a much paler tint, and sometimes quite white. The leaves are very good in salad; they also make an excellent fodder for cows and horses; and the roots are either used as a substitute for coffee, or to mix with coffee to improve its flavour. The plant is a perennial, and it flowers in July and August.

## CHAPTER XLIX.

THE BORAGE FAMILY. (*BORAGINÆ, Juss.*)

CHARACTER OF THE ORDER.—Calyx persistent, with four or five divisions. Corolla hypogynous, monopetalous, generally regular, five-cleft, sometimes four-cleft; with an imbricate aestivation. Stamens inserted upon the petals, equal to the number of lobes of the corolla, and alternate with them, seldom in greater number. Ovarium four-parted, four-seeded; ovula attached to the lowest point of the cavity;

style simple; stigma simple or bifid. Nuts four, distinct. Seed separable from the pericarpium, destitute of albumen. Embryo with a superior radicle, and flat cotyledons parallel with the axis.—Herbaceous plants or shrubs. Stems round. Leaves alternate, covered with asperities, consisting of hairs proceeding from an indurated enlarged base. Flowers in one-sided spikes or racemes. (*Lindley.*)

DESCRIPTION, &c.—The plants belonging to this order are easily distinguished by botanists by their seed-vessels, which consist of four distinct nuts; and by amateurs by the colour of their flowers, which generally contain a bright blue and a bright pink in the same flower. The order is not a very extensive one, but it contains a good many well-known British plants. All the genera are in the Linnæan class and order Pentandria Monogynia, each flower having five stamens and a single style.

## GENUS I.

THE VIPER'S-BUGLOSS. (*ECCHIUM, Lin.*)*Lin. Syst. PENTANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx five-parted. Corolla with a short tube; limb large, campanulate, obliquely five-lobed; segments unequal; the two upper largest, the lowest small, acute, and reflexed. Nuts covered with little tubercles. (*Dec.*)

DESCRIPTION, &c.—There is only one British species, viz. the common Viper's Bugloss (*E. vulgare*), and this plant is a striking illustration of the peculiarity of the colours of the order, as some of its flowers are of a bright blue, others as bright and decided a pink, and others a clear purple. If this plant were not a common weed, it would be highly valued for its beauty; but it is so common in some places, particularly in Cambridgeshire and Norfolk, as to be regarded only as a troublesome weed. The name of *Echium* is derived from the Greek word for a viper; and both it and the English appellation, allude to the belief that was formerly entertained, that this plant was a sure antidote to the poisonous bite of a viper. The plant is a biennial, and it flowers in June and July.

## GENUS II.

THE LUNGWORT. (PULMONARIA, *Lin.*)*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx campanulate, five-cleft, five-cornered. Corolla funnel-shaped, somewhat five-lobed; the limb nearly erect. Stigma obtuse, emarginate. (*Dec.*)

DESCRIPTION, &c.—The plants belonging to this genus are all mucilaginous, and hence a decoction of them was formerly frequently recommended for diseases of the lungs, and from this circumstance has arisen both the English and the botanic name.

1.—THE COMMON LUNGWORT. (PULMONARIA OFFICINALIS, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 118; 2nd ed., t. 267; and our *fig.* 1, in Pl. 43.SPECIFIC CHARACTER.—Leaves ovate. (*Smith.*)

DESCRIPTION, &c.—This species is not by any means common in a wild state in Great Britain, and when it is found it is generally under the thick shade of trees and shrubs. Every part of it is mucilaginous, and when boiled down and suffered to get cold, it forms a tolerably stiff jelly. The old botanists remark that the spotted appearance of the leaves, which bear some resemblance in appearance to the lungs, are intended by nature to mark the use of the plant. The species is a perennial, and the flowers appear in April or May.

THE NARROW-LEAVED LUNGWORT. (P. ANGUSTIFOLIA, *Lin.*)

This species is only found in the Isle of Wight, and some few other places. The leaves are less spotted and much longer than those of the common kind. The flowers are also smaller and less abundant. The plant is a perennial, and it flowers in May.

## GENUS III.

THE GROMWELL. (LITHOSPERMUM, *Lin.*)*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-parted. Corolla small, five-lobed, funnel-shaped. Anthers oblong, included in the throat of the corolla. Stigma obtuse, bifid. Nuts shining, even, or wrinkled. (*Dec.*)

DESCRIPTION, &c.—The plants belonging to this genus are all herbaceous, with small flowers. The name of *Lithospermum* is from two Greek words, signifying stone-like seed; in allusion to the hard shining seeds of the plant. The English name of Gromwell has the same origin, from two Celtic words.

1.—THE COMMON GROMWELL, OR GREY MILL. (LITHOSPERMUM OFFICINALE, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 134; 2nd ed., t. 259; and our *fig.* 2, in Pl. 43.SPECIFIC CHARACTER.—Nuts even. Corolla not much longer than the calyx. Leaves lanceolate, rather acute, with lateral transverse ribs. (*Lindl.*)

DESCRIPTION, &c.—This species is not by any means common, and it is only found in dry, gravelly, or chalky soils. The root is a perennial, but the stem dies down to the ground every winter. This plant was anciently supposed to be a cure for the stone, on account of the stony seeds; but this belief has long since passed away. The flowers are small, and they appear in May.

THE CORN GROMWELL, OR BASTARD ALKANET. (L. ARVENSE, *Lin.*)

This is an annual plant with small white flowers, which is often so abundant in corn fields as to be extremely troublesome. It flowers nearly all the summer. The root abounds with a deep-red dye, which, according to Linnaeus, is used by the country girls in Sweden to paint their faces.

THE CREEPING GROMWELL. (L. PURPURO-CÆRULEUM, *Lin.*)

This plant is only found in Kent, in the west of England, and in Wales. Its stems are generally procumbent, but its flowers are produced on erect shoots. It is a perennial, and it flowers in May.

THE SEA GROMWELL. (L. MARITIMUM, *Lehm.*)

This very curious plant is found abundantly on the sandy sea-coast of Scotland and the north of England. "The whole plant is succulent and glaucous. The leaves, although not hairy, are sprinkled with minute cartilaginous grains, similar to those from which the hairs or bristles spring in other plants of the same natural order. When dried, these grains remain white, while the rest of the herb becomes black. The flavour of the plant is thought to resemble that of oysters." (Sowerby's *English Botany*, 2nd ed.) The plant is a perennial, with a fleshy tapering root, and it flowers in July and August.

## GENUS IV.

THE COMFREY. (SYMPHYTUM, *Lin.*)

*Lin. Syst. PENTANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx five-cleft. Corolla cylindrical, campanulate; tube very short; limb ventricose, with five short lobes. Scales of the orifice subulate, converging. (*Lindley.*)

DESCRIPTION, &c.—There are only two British species in this genus. The name of *Symphytum* is derived from a Greek word signifying to unite, from the juice of the plant being supposed to be exceedingly efficacious in curing wounds.

1.—THE COMMON COMFREY. (SYMPHYTUM OFFICINALE, *Lin.*)

SYNONYME.—*S. patens*, *Sibth.*

ENGRAVINGS.—Eng. Bot., t. 817; 2nd ed., t. 269.

SPECIFIC CHARACTER.—Leaves ovate-lanceolate, decurrent, finely hairy. (*Smith.*)

DESCRIPTION, &c.—This plant is only found in moist places. It produces a succession of pale-yellowish flowers all the summer. The root abounds in mucilage, like that of the Marsh-Mallow. There is a variety with purple flowers.

2.—THE TUBEROUS-ROOTED COMFREY. (SYMPHYTUM TUBEROSUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1502; 2nd ed., t. 270; and our *fig. 3*, in Pl. 43.

SPECIFIC CHARACTER.—Leaves ovate, slightly decurrent, rather harsh; upper ones opposite. (*Smith.*)

DESCRIPTION, &c.—This species is also found in moist shady places, but only in the north of England and in Scotland. It is a perennial, and it flowers in June and July.



1 Lungwort. 2 Gromwell. 3 Tuberous-rooted Comfrey. 4 Borage. 5 Small Bugloss.  
6 Evergreen Alkanet. 7 Red Hounds-tongue. 8 Greek Valerian.



## GENUS V.

THE BORAGE. (BORAGE, *Lin.*)*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-parted. Corolla rotate, five-cleft, usually spreading. Scales of the orifice obtuse, emarginate. Nuts wrinkled. (*Lindley.*)

DESCRIPTION, &c.—The name of the Borage is said to be corrupted from courage, and to be applied to the plant in consequence of the wonderful effect of its juice in raising the spirits. There is only one British species, and even that is said not to be a true native.

1.—THE COMMON BORAGE. (BORAGE OFFICINALIS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 36; 2nd ed., t. 271; and our *fig. 4*, in Pl. 43.

SPECIFIC CHARACTER.—Limb of the corolla flat, much longer than

the tube; mouth with a double row of valves; the innermost awl-shaped, bearing the stamens. (*Smith.*)

DESCRIPTION, &c.—This plant, though its bright blue flowers are now found wherever there are dunghills, or heaps of rubbish, in every part of England, was originally introduced from the Levant, and cultivated in gardens for its use in medicine, as it was considered one of the four cordial flowers, the others being the rose, the violet, and the alkanet, which were used to make a ptisan to raise the spirits, and to give strength and courage when it was necessary to make any extraordinary exertions. The plant is generally considered a perennial, but it seldom lives longer than two years. Both the stem and leaves are succulent and mucilaginous, and they have a peculiarly faint sickly smell when they are bruised. The flowers continue to appear all the summer.

## GENUS VI.

THE BUGLOSS. (LYCOPSIS, *Lin.*)*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-cleft. Corolla funnel-shaped, five-lobed; limb nearly erect; tube incurved. Scales of the orifice ovate, prominent, converging. Stigma emarginate. Nuts sculptured at the base. (*Dec.*)

DESCRIPTION, &c.—There is only one British species in this genus. The name of *Lycopsis* signifies wolf's-face, in allusion to the shape of the flowers of some of the exotic species, which bear some resemblance to the face of an animal.

1.—THE SMALL BUGLOSS. (LYCOPSIS ARVENSIS, *Lin.*)

SYNONYME.—*Anchusa arvensis*, *Lehm.*

ENGRAVINGS.—Eng. Bot. t. 938; 2nd ed., t. 273; and our *fig. 5*, in Pl. 43.

SPECIFIC CHARACTER.—Leaves lanceolate, wavy, somewhat toothed, very bristly. Stalks of the flowers and fruit erect. Limb of the corolla slightly unequal. (*Smith.*)

DESCRIPTION, &c.—This is a common little annual plant, which flowers in June, and which withers up as soon as the seeds have fallen. Both the stem and leaves are covered with sharp bristles, which grow from small white tubercles. The leaves are mucilaginous.

## GENUS VII.

THE ALKANET. (ANCHUSA, *Lin.*)*Lin. Syst. PENTANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx five-cleft. Corolla funnel-shaped, five-lobed; the limb erect; the lobes entire. The other characters of *Lycopsis*. (*Dec.*)

DESCRIPTION, &c.—This genus is named from a Greek word signifying to paint; and the roots of one exotic species are sometimes pressed to extract a red dye from them, which is used to paint the face. It is also used for dyeing wood red in imitation of mahogany.

1.—THE COMMON ALKANET. (ANCHUSA OFFICINALIS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 662; 2nd ed., t. 263.

SPECIFIC CHARACTER.—Spikes imbricated, unilateral. Bracteas ovate, as long as the calyx. Leaves lanceolate. (*Smith.*)

DESCRIPTION, &c.—This plant, in former times, had a similar reputation to Borage; but now, though it is slightly mucilaginous, it does not appear to possess any other medicinal property. It is a perennial, with a fleshy spindle-shaped root, like a carrot, and it flowers in June and July. It is only found wild in Northumberland.

2.—THE EVERGREEN ALKANET. (ANCHUSA SEMPERVIRENS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 45; 2nd ed., t. 264; and our *fig.* 6, in Pl. 43. dense spikes, with an intermediate flower, and two principal ovate bracteas. Leaves ovate. (*Smith.*)

SPECIFIC CHARACTER.—Flower-stalks axillary, each bearing two

DESCRIPTION, &c.—This plant is common in waste ground near Norwich, but it is rare in the other parts of Great Britain. It is called an evergreen, because the leaves succeed each other so rapidly that the plant appears always in leaf; and the flowers continue in a similar manner to appear in succession all the summer. The plant is a perennial, and its flowers begin to appear in May.

## GENUS VIII.

THE GERMAN MADWORT. (ASPERUGO, *Lin.*)*Lin. Syst. PENTANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx five-cleft, unequal, with intermediate teeth. Corolla with a short tube, and a five-lobed limb. Scales of the orifice convex, converging. Nuts covered by the doubled, compressed calyx. (*Lindley.*)

DESCRIPTION, &c.—There is only one species of this genus (*A. procumbens*, *Lin.*). It is an annual plant, with square weak stems, covered, as well as the leaves, with short pointed bristles, which stick to the hands and clothes like those of the Goose-grass. The flowers, which are very small, appear in June and July.

## GENUS IX.

THE SCORPION-GRASS. (MYOSOTIS, *Lin.*)*Lin. Syst. PENTANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx five-cleft, or five-toothed. Corolla hypocrateriform, with a short tube; limb flat, with five emarginate lobes. Scales of the orifice convex, converging. Nuts smooth. (*Lindley.*)

DESCRIPTION, &c.—The name of *Myosotis* is derived from two Greek words signifying mouse-ear, and this

English name is applied to some of the species. There are numerous kinds, but the most interesting is the Forget-Me-Not (*M. palustris*). *M. repens*, which has generally white flowers, is also a very handsome species ; but *M. sylvatica* and *M. alpestris* have the handsomest flowers. All the other species are insignificant weeds.

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### GENUS X.

#### THE HOUND'S-TONGUE. (CYNOGLOSSUM, *Lin.*)

*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-parted. Corolla short, funnel-shaped, five-lobed. Scales of the orifice convex, converging. Stigma emarginate. Nuts depressed. (*Lindley.*)

DESCRIPTION, &c.—The name of this genus is derived from two Greek words, signifying dog's-tongue ; in allusion to the shape and texture of the leaves.

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#### 1.—THE RED HOUND'S-TONGUE. (CYNOGLOSSUM OFFICINALE, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 921 ; 2nd ed., t. 265 ; and our fig. 7, | leaves broadly lanceolate, downy, sessile. Flowers without bracteas. in Pl. 43. (Smith.)

SPECIFIC CHARACTER.—Stamens shorter than the corolla. Stem—

DESCRIPTION, &c.—This species is found in great abundance in waste places on the roadside in almost every part of Great Britain. The root is tapering and fleshy ; the leaves are soft and downy to the touch, with a strong disagreeable smell, like that of mice ; and the seeds are covered with hooked prickles, which make them adhere to everything they touch. The plant is a biennial, and it produces its bright red flowers in June and July.

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#### THE GREEN-LEAVED HOUND'S-TONGUE. (C. SYLVATICUM, *Hænke.*)

This plant is found principally in Essex, and it differs from the common kind in being entirely without the downy softness of the leaf. Its flowers are also of a dingy purple, instead of being of a bright red ; and the plant is destitute of smell. It is a biennial, and its flowers appear in June.

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### CHAPTER L.

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#### THE BINDWEED FAMILY. (CONVOLVULACEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Calyx persistent, in five divisions. Corolla monopetalous, hypogynous, regular, deciduous ; the limb five-lobed, generally plaited. Stamens five, inserted into the base of the corolla, and alternate with its segments. Ovarium simple, with two or four cells, seldom with one ; sometimes in two or four divisions, few-seeded ; the ovules definite and erect ; style one, usually divided at the top, sometimes down to the base ; stigmas obtuse or acute. Disk annular, hypogynous. Capsule with from one to four cells ; the valves fitting to the angles of a loose dissepiment, bearing the seeds at its base ; sometimes valveless or dehiscing transversely. Seeds with a small quantity of mucilaginous albumen ; embryo curved ; cotyledons shrivelled ; radicle inferior. Herbaceous plants or shrubs, usually twining and milky, smooth, or with a simple pubescence. Leaves alternate, undivided, or lobed, seldom pinnatifid, with no stipulae. Inflorescence axillary or terminal ; peduncles one or many-flowered ; the partial ones generally with two bracteas. (*R. Br.*)

DESCRIPTION, &c.—This order includes not only all the *Convolvulus* plants, but the curious parasite called the Dodder, which is totally unlike them. The genus *Convolvulus* of Linnæus has been separated by modern botanists into two general.

## GENUS I.

THE CONVOLVULUS. (CONVOLVULUS, *Lin.*)*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-parted, naked, or with two small bractæ at the base. Corolla campanulate, with five plaits. Stamens shorter than the limb. Ovarium two-celled, rarely three-celled; cells two-seeded. Style undivided. Stigmas two, filiform. Capsule valvular. (*R. Br.*)

DESCRIPTION, &c.—The only British species left in this genus is the common dwarf Convolvulus (*C. arvensis*, *Lin.*), a beautiful little pink flower, which is abundant in gravelly soils both in cultivated and in waste ground. It is a perennial, and flowers in June and July.

## GENUS II.

THE BINDWEED. (CALYSTEGIA, *R. Br.*)*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-parted, inclosed in two foliaceous bractæ. Corolla campanulate, with five plaths. Stamens nearly equal, shorter than the limb. Ovarium half two-celled, four-seeded. | Style undivided. Stigmata two, obtuse, (taper or round.) Capsule one-celled. (*R. Br.*)

DESCRIPTION, &c.—There are only two species in this genus, viz. the common white Bindweed of the hedges (*C. sepium*, *R. Br.*), and the large pink Convolvulus (*C. Soldanella*, *R. Br.*), which is found only on the sea side. Both are perennials, and flower from June till August.

## GENUS III.

THE DODDER. (CUSCUTA, *Lin.*)*Lin. Syst.* PENTANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx four or five-cleft. Corolla roundish, | Stigmata two. Capsule dehiscing transversely. Embryo without urceolate; limb four or five-cleft, with as many scales at the base. | cotyledons. Parasitical twining leafless plants, with thread-like stems. Stamens four or five. Ovarium two cells, each with two seeds. | (*Lindley.*)

DESCRIPTION, &c.—There are two species of this very curious plant, but they differ very little from each other except in size. They both spring from the soil, and twine round any plant that may chance to come in their way. As soon as they have done this, the original root withers, and the parasite feeds entirely on the hapless plant it has seized. In the year 1843, Clover and other similar plants were attacked by this weed in Norfolk and some other counties, and whole fields were destroyed. Fortunately both kinds of Dodder are annuals, and die at the approach of winter.

## CHAPTER LI.

THE CUCUMBER FAMILY. (CUCURBITACEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Flowers usually unisexual, sometimes hermaphrodite. Calyx five-toothed. Corolla five-parted, scarcely distinguishable from the calyx, very cellular, with strongly marked, reticulated veiis. Stamens five, either distinct, or cohering in three parcels; anthers two-celled, very sinuous. Ovary inferior, one-celled, with three parietal placentæ; style short; stigmas very thick, velvety or fringed. Fruit fleshy, more or less succulent, crowned by the scar of the calyx; one-celled, with three parietal placentæ. Seeds

flat, ovate, enveloped in an arillus, which is either juicy, or dry and membranous; testa coriaceous, often thick at the margin; embryo flat, with no albumen; cotyledons foliaceous, veined; radicle next the hilum. Roots annual or perennial, fibrous or tuberous. Stem succulent, climbing by means of tendrils formed by the abortive leaves. Leaves palmated, very succulent, covered with numerous asperities. Flowers white, red, or yellow. (*Lindley.*)

DESCRIPTION, &c.—The Cucumber not being a native of this country, the only genus of British plants belonging to this order is the Bryony.

## GENUS I.

THE WHITE BRYONY. (BRYONIA, *Lin.*)*Lin. Syst.* MONOCIA PENTANDRIA.

GENERIC CHARACTER.—Flowers monoeious or dioecious. Petals | small, ovate, compressed seeds, which are more or less bordered.— scarcely cohering at the base.—Males. Calyx five-toothed. Stamens | Tendrils simple. (*Lindl.*)  
in three parcels.—Females. Styles trifid. Fruit succulent, with

DESCRIPTION, &c.—The only plant belonging to this genus is the white Bryony; for, strange to say, the black Bryony (*Tamus communis*) is of not only a different genus, but in a different order. The white Bryony (*B. dioica*, *Jacq.*) is a very elegant climbing plant, common in hedge-rows and thickets in every part of England. The leaves are somewhat like those of the Vine; the flowers, which appear in May, are green, and the berries of a beautiful coral red. The plant is a perennial, but its stems die down to the ground every winter. The root is large and fleshy, and if surrounded by a mould, it may be made to take any form. I remember several years ago a man bringing a strange root to our house at Bayswater, which he said was that of a Mandrake, and which looked very much like two children grown together. It was first shown to me, and the man finding I was totally ignorant what it was, told me a long story about it screaming when it was torn from the ground, and bleeding real blood where it was wounded. Of course this convinced me the man was an impostor, and I sent him away; and when Mr. Loudon returned, he told me what the root must have been. The root bruised was formerly used medicinally, and it is still used in country places as a cure for bruises, which it relieves on the principle of counter-irritation, as, when applied in a fresh state, it raises a slight blister on the skin.

## CHAPTER LII.

THE GREEK VALERIAN FAMILY. (POLEMONIACEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Calyx inferior, monosepalous, five-parted, persistent, sometimes irregular. Corolla regular, five-lobed. Stamens five, inserted into the middle of the tube of the corolla, and alternate with its segments. Ovarium superior, three-celled, with a few ovula; style simple; stigma trifid. Capsule three-celled, three-

valved, few-seeded, with a loculicidal dehiscence; the valves separating from the axis. Seeds angular or oval, often enveloped in mucus; embryo straight in the axis of horny albumen; radicle inferior; cotyledons elliptical, foliaceous. Herbaceous plants, with opposite, or occasionally alternate, compound, or simple leaves. (*Lindl.*)

## GENUS I.

THE GREEK VALERIAN. (POLEMONIUM, *Lin.*)*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-cleft. Corolla rotate, with a short tube; limb five-lobed. Filaments broadest at the base; anthers incumbeant. (*Dec.*)

DESCRIPTION, &c.—There is only one British species in this genus. The name of *Polemonium* is derived from the Greek, and it is said to signify war, from two kings having engaged in war, because they could not agree which should have the honour of having discovered it.

1.—BLUE JACOB'S LADDER, OR THE COMMON GREEK VALERIAN. (*POLEMONIUM CÆRULEUM*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 14; 2nd ed., t. 295; and our *fig. 8*, | SPECIFIC CHARACTER.—Leaves pinnate. Flowers erect. Root in Pl. 43.

DESCRIPTION, &c.—This species, though common in gardens, is rare in a wild state in Britain, and it is said to grow only in Yorkshire. I have, however, myself found it growing abundantly on the hedge-banks of the sandy lanes near Shenstone, in Staffordshire, where it is called Charity; why, it would be difficult to say, but its other English names seem equally inappropriate. It is a perennial, and flowers in May or June. Linnæus says that it occasionally produces white flowers from the same root as the blue ones; but I have never found this to be the case in the wild plants that I have seen.

## CHAPTER LIII.

THE PLANTAIN FAMILY. (*PLANTAGINÆ, Juss.*)

CHARACTER OF THE ORDER.—Flowers usually hermaphrodite; seldom unisexual. Calyx four-parted, persistent. Corolla monopetalous, hypogynous, scarious, with a four-parted limb. Stamens four, inserted into the corolla alternately with its segments; filaments filiform, doubled inwards in aestivation; anthers versatile, two-celled. Ovarium sessile, two, or very seldom four-celled; ovula peltate or erect, solitary, twin, or indefinite; style simple, subulate; stigma

hispid, simple. Capsule membranous, dehiscing transversely. Seeds sessile, peltate, or erect, solitary, twin, or indefinite; testa mucilaginous; embryo in the axis of fleshy albumen; radicle inferior; plumula inconspicuous.—Herbaceous plants, usually stemless, occasionally with a stem; hair simple, articulated. Leaves flat and ribbed, or taper and fleshy. Flowers in spikes, rarely solitary. (*Lindl.*)

DESCRIPTION, &c.—This order contains only two genera, both of common weeds possessing no beauty in their flowers. The genus *Plantago* (the Plantain) contains several species, the best known of which are the Greater Plantain or Waybread (*P. major*, *Lin.*), which is a favourite plant with canaries and other birds kept in cages, and the little plant called the Star of the Earth (*P. Coronopus*, *Lin.*). The other genus (*Littorella*) only contains one British plant, viz. the Plantain Shore-weed (*L. lacustris*), an insignificant little weed, found on the shores of the Highland and Cumberland lakes.

## CHAPTER LIV.

THE LEADWORT FAMILY. (*PLUMBAGINÆ, Juss.*)

CHARACTER OF THE ORDER.—Calyx tubular, plaited, persistent. Corolla monopetalous or five-petalous, regular. Stamens definite; in the monopetalous species hypogynous, in the polypetalous inserted on the petals. Ovarium single, one-seeded; ovulum inverted, pendulous from the point of an umbilical cord arising from the bottom of the cavity; styles five, seldom three or four; stigmas nearly the same

number. Pericarpium a nearly indehiscent utricle. Seed inverted; testa simple; embryo straight; radicle superior.—Herbaceous plants or under shrubs, variable in appearance. Leaves alternate or clustered, undivided, somewhat sheathing at the base. Flowers in spikes or heads. (*R. Br.*)

DESCRIPTION, &c.—The only British plants included in this order are the Common Thrift or Sea Gilly-flower, and two or three species of Sea Lavender.

THE THRIFT (*ARMERIA MARITIMA*, *Dec.*),

Which is well known in gardens from the use made of it for edgings, is found in various parts of Great Britain. It is a perennial, and it produces its pretty pink flowers in July and August. There is a peculiarity in this

plant which deserves notice. The base of the involucre ends in a kind of sheath which is at first attached to the roof, but as the flower-stalk becomes elongated, this sheath is torn off, and carried up with the flowers, so that it hangs half-way down the stalk, with its lower end loose and lacerated.

THE SEA LAVENDER. (*STATICE LIMONIUM, Lin.*)

This is a very curious plant, the flower-stalks being so covered with bracts as to look almost like flowers, and the flowers themselves being only on one side of each stalk so that they look like plumes or tufts. There are two other kinds of Sea Lavender, but they are less ornamental than the common kind and less abundant. All the species only grow on the sea-shore, and they are generally found in salt marshes. They are all perennials, and flower in July and August.

CHAPTER LV.

THE OLIVE FAMILY. (*OLEACEE, Hoff. et Link.*)

**CHARACTER OF THE ORDER.**—Flowers hermaphrodite, sometimes dioecious. Calyx monophyllous, divided, persistent, inferior. Corolla hypogynous, monopetalous, four-cleft, occasionally of four petals, connected in pairs by the intervention of the filaments, sometimes without petals; aestivation somewhat valvate. Stamens two, alternate with the segments of the corolla or the petals; anthers two-celled, opening longitudinally. Ovarium simple, without any hypogynous disk, two-celled; the cells two-seeded; the ovules pendulous and collateral.

Style one or none. Stigma bifid or undivided. Fruit drupaceous, berry, or capsular; often by abortion one-seeded. Seeds with dense, fleshy, abundant albumen; embryo straight; cotyledons foliaceous, partly asunder; radicle superior; plumula inconspicuous. Trees or shrubs. Leaves opposite, simple, seldom pinnated. Flowers in terminal or axillary racemes or panicles; the pedicels opposite, with single bracts. (*R. Br.*)

**DESCRIPTION, &c.**—The only two British plants belonging to this order are the Common Privet (*Ligustrum vulgare, Lin.*), and the ash (*Fraxinus excelsior, Lin.*). There is another species of ash (*F. heterophylla, Vahl.*), but it is rare.

CHAPTER LVI.

THE HEATH FAMILY. (*ERICÆ, Juss.*)

**CHARACTER OF THE ORDER.**—Calyx monophyllous, four or five-cleft, nearly equal, inferior, persistent. Corolla hypogynous, monopetalous, four or five-cleft, occasionally separable into four or five petals, regular, often withering, with an imbricated aestivation. Stamens definite, equal in number to the segments of the corolla, or twice as many, hypogynous, or inserted into the base of the corolla; anthers two-celled; the cells hard and dry, separate either at the apex or the base, where they are furnished with some kind of appendage, and dehiscing

by a pore or a cleft. Ovarium surrounded at the base by a disk or secreting scales, many-celled, many-seeded. Style one, straight. Stigma one, undivided, or toothed. Fruit capsular, many-celled, with central placentæ; dehiscence various. Seeds indefinite, minute; testa firmly adhering to the nucleus; embryo cylindrical, in the axis of fleshy albumen; radicle opposite the hilum. Shrubs or under shrubs. Leaves evergreen, rigid, entire, whorled, or opposite, without stipulae. Inflorescence variable; the pedicels generally bracteate. (*Lindley.*)

**DESCRIPTION, &c.**—All the British species belonging to the Heath family have hair-like roots, showy flowers, with anthers of peculiar construction, and evergreen leaves; and most of them are found abundantly both in Great Britain and Ireland.

## GENUS I.

THE AZALEA. (AZALEA, *Lin.*)*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-cleft, coloured. Corolla campanulate, five-cleft. Stamens five, hypogynous. Capsule five-celled, many-seeded, with five valves dehiscing through the dissepiments. (*Lindl.*)

DESCRIPTION, &c.—There is only one British species in this genus, and it is placed in the Linnæan class and order Pentandria Monogynia, from its five stamens, and its single style. The name of Azalea is taken from the Greek word for parched or arid, in allusion to the kind of places in which the plants grow.

1.—THE PROCUMBENT AZALEA. (AZALEA PROCUMBENS, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 863; 2nd ed., t. 289; and our *fig. 1*, in Pl. 44.SPECIFIC CHARACTER.—Branches spreading and reclining. Leaves opposite, revolute, very smooth. (*Smith.*)

DESCRIPTION, &c.—This elegant little shrub grows in great abundance on the Scotch mountains, and almost covers them with its bright purple flowers, which appear in July. At first sight, it appears much more like a Heath than an Azalea.

## GENUS II.

THE LEDUM. (LEDUM, *Lin.*)*Lin. Syst.* DECANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx minute, five-toothed. Corolla five-parted. Stamens five or ten, inserted into the base of the calyx. Capsule five-celled, many-seeded, with five valves dehiscing through the dissepiments. (*Lindl.*)

DESCRIPTION, &c.—There is but one species of this genus (*Ledum palustre*, *Lin.*), and that has only been found in Ireland. It is a beautiful little shrub with white tufted flowers, and it will only thrive in marshy places. It flowers in July and August. The plant is placed in the Linnæan class and order Decandria Digynia, from its ten stamens and its double style.

## GENUS III.

THE ANDROMEDA. (ANDROMEDA, *Lin.*)*Lin. Syst.* DECANDRIA DIGYNIA.

GENERIC CHARACTER.—Calyx small, five-parted. Corolla ovate, with a five-cleft reflexed limb. Stamens ten, erect. Capsule five-celled, five-valved. Seeds numerous, minute. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species of this genus, which has received its name from the first species that was found growing on a rock in a wild and desolate region; and thus reminding Linnæus of Andromeda, who was chained to a rock within reach of the waves of the sea till she was delivered by Perseus. The genus is placed in the same Linnæan class and order as Ledum.



1 Procumbent Azalea. 2 Marsh Andromeda. 3 Long-leaf Heather. 4 Irish  
 Menziesia. 5 Cross-leaved Heath. 6 Cornish Heath. 7 Red bear-berry.  
 8 Round-leaved Winter-green. 9 Yellow Broom-nest.



1.—THE MARSH ANDROMEDA, OR WILD ROSEMARY. (*ANDROMEDA POLIFOLIA*, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 713; 2nd ed., t. 586; and our *fig.* 2, in Pl. 44.SPECIFIC CHARACTER.—Clusters terminal. Leaves alternate, lanceolate, revolute; glaucous beneath. (*Smith.*)

DESCRIPTION, &amp;c.—An elegant little shrub, which grows in great abundance in the peat bogs of England, Scotland, and Ireland. Its very elegant rose-coloured flowers are produced in June.

## GENUS IV.

THE LING. (*CALLUNA*, *Salisb.*)*Lin. Syst. OCTANDRIA MONOGYNIA.*GENERIC CHARACTER.—Calyx of four coloured sepals, surrounded by four coloured bracts. Corolla campanulate, four-cleft. Stamens eight. Capsule four-celled, the dissepiments adhering to the axis, and with four valves dehiscing through the dissepiments. (*Lindley.*)DESCRIPTION, &c.—This plant is the true Heather of the north, though it has been removed from the genus *Erica*. The name of *Calluna* is derived from a Greek word signifying to cleanse; and it is said to be given to this plant in allusion to the brooms that are made of it. The genus is placed in the Linnæan class and order Octandria Monogynia, from its eight stamens and its single style.1.—THE COMMON LING, OR HEATHER. (*CALLUNA VULGARIS*, *Salisb.*)SYNONYMES.—*Erica vulgaris*, *Lin.*; *Grig.*ENGRAVINGS.—Eng. Bot., t. 1013; 2nd ed., t. 560; and our *fig.* 3, in Pl. 44.

DESCRIPTION, &amp;c.—No specific character is given of this plant, as it is the only species of the genus. It is the Heather we so often read of as being gathered to form beds in the Highlands; and which, in fact, grows in such profusion in that part of Scotland, as to form a rich covering for hills and moorlands which would otherwise have been a barren waste. The plant is a low branching shrub, and it produces its deep crimson flowers from June till October. The following elegant lines were addressed to this plant by Mrs. Grant of Laggan:—

“ Gem of the heath, whose modest bloom  
 Sheds beauty o'er the lonely moor ;  
 Tho' thou dispense no rich perfume,  
 Nor yet with splendid tints allure ;  
 Both valour's crest and beauty's bower  
 Oft hast thou decked, a favourite flower.

“ Flower of the wild, whose purple glow  
 Adorns the dusky mountain's side ;  
 Not the gay hues of Iris' bow,  
 Nor garden's artful varied pride,  
 With all its wreath of sweets could cheer,  
 Like thee, the hardy mountaineer.”

The Ling is the badge of the Highland clan Macdonald.

## GENUS V.

THE MENZIESIA. (*MENZIESIA*, *Smith.*)*Lin. Syst. OCTANDRIA MONOGYNIA.*GENERIC CHARACTER.—Calyx four-parted. Corolla ventricose, with a spreading four or five-toothed limb. Stamens eight or ten, inserted into the base of the corolla. Capsule four-celled, many-seeded, with four valves dehiscing through the dissepiments. (*Lindley.*)

DESCRIPTION, &amp;c.—The very pretty little plants belonging to this genus are only found in England, Scotland, and Ireland. They have the habit of Heaths, with narrow evergreen leaves, and beautiful bell-shaped

flowers. The name of *Menziesia* was given to this genus in honour of the late Mr. Menzies, an excellent botanist and a truly estimable man, who died lately at a very advanced age, having made the circuit of the world with Vancouver (the immediate successor of Captain Cook) in the year 1791.

1.—THE SCOTTISH MENZIESIA. (*MENZIESIA CÆRULEA*, *Swartz.*)

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| SYNONYMS.— <i>Andromeda cærulea</i> , <i>Lin.</i> ; <i>A. taxifolia</i> , <i>Pall.</i> ; <i>Erica cærulea</i> , <i>Willd.</i><br>ENGRAVINGS.—Eng. Bot., t. 2469; 2nd ed., t. 555. | SPECIFIC CHARACTER.—Leaves linear, obtuse, with cartilaginous teeth. Flower-stalks terminal, aggregate, simple. Flowers five-cleft, decandrous. ( <i>Smith.</i> ) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|

DESCRIPTION, &c.—This very elegant little plant is only found occasionally in Great Britain, on heathy moors in the northwest of Scotland, though it is common in North America. The flowers are large, and very handsome, but they are purple rather than blue. They appear in June and July.

2.—THE IRISH MENZIESIA, OR ST. DABEOC'S HEATH. (*MENZIESIA POLIFOLIA*, *Smith.*)

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| SYNONYMS.— <i>M. Daboei</i> , <i>D. Don.</i> ; <i>Andromeda Daboeia</i> , <i>Lin.</i> ; <i>Erica Daboei</i> , <i>Lin.</i> ; <i>Vaccinium cantabricum</i> , <i>Hudson.</i><br>ENGRAVINGS.—Eng. Bot., t. 35; 2nd ed., t. 556; and our <i>fig. 4</i> , in Pl. 44. | SPECIFIC CHARACTER.—Leaves ovate, revolute; downy and white beneath. Flowers four-cleft, octandrous, in terminal leafy clusters. ( <i>Smith.</i> ) |
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DESCRIPTION, &c.—A beautiful little shrub, with pink flowers, which is found in great abundance on the mountains in the west of Ireland. There is a variety with white flowers. The flowers begin to appear in July, and they continue till autumn.

GENUS VI.

THE HEATH. (*ERICA*, *Lin.*)

*Lin. Syst. OCTANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx four-parted. Corolla campanulate, often ventricose, five-toothed. Stamens eight. Capsule with from four to eight cells, and the same number of valves. (*Lindley.*)

DESCRIPTION, &c.—This genus is said to contain more than five hundred species, most of which are natives of southern Africa; all the species, both in the northern and southern hemispheres, are, however, always found to the east. The name of *Erica* is derived from a Greek word signifying to break, because the plant was formerly supposed to be efficacious in curing the stone. The genus is placed in the Linnæan class and order Octandria Monogynia, from its eight stamens and its single style.

1.—THE CROSS-LEAVED HEATH. (*ERICA TETRALIX*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1014; 2nd ed., t. 557; and our *fig. 5*, in Pl. 44.

SPECIFIC CHARACTER.—Anthers horned. Style nearly concealed. Corolla ovate. Leaves fringed, four in a whorl. Flowers in round tufts. (*Smith.*)

DESCRIPTION, &c.—This is, perhaps, the most common of all our native heaths, and it is certainly the most beautiful. It is found abundantly on moist moors in every part of Great Britain; and it produces its beautiful wax-like flowers during all the summer, and even till late in autumn.

2.—THE CORNISH HEATH. (ERIC A VAGANS, *Lin.*)SYNONYMES.—*E. multiflora*, *Hudson*; *E. didyma*, *Withering*.

ENGRAVINGS.—Eng. Bot., t. 3; 2nd ed., t. 559; and our fig. 6, in Pl. 44.

SPECIFIC CHARACTER.—Anthers simple, deeply cleft, prominent as well as the style. Corolla bell-shaped. Leaves four in a whorl. Flowers on simple, crowded, axillary stalks. (*Smith.*)

DESCRIPTION, &c.—This species, though extremely abundant in Cornwall, is seldom, if ever, found in any other part of Great Britain, or, indeed, anywhere else except in the south of Europe, where it is very abundant. It is very different from most other heaths, the corolla being open; but it is an ornamental little shrub, and frequently cultivated in gardens. The flowers expand in July and August, and though they are generally of a deep rose-colour, they are sometimes of a pale pink, and sometimes even white.

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THE FINE-LEAVED HEATH. (E. CINEREA, *Lin.*)

This species is abundant on turf Heath where the soil is dry. It is a straggling branching shrub, growing from a foot to eighteen inches high, and flowering from June till October.

THE FRINGED-LEAVED HEATH. (E. CILIARIS, *Lin.*)

This plant has only been found in Britain, near Truro, in Cornwall, and it is probably not a true native. It is a dwarf shrub, and flowers in July and August.

THE MEDITERRANEAN HEATH. (E. MEDITERRANEA, *Lin.*)

This species was never supposed to be a native of the British Islands till it was found in September, 1830, in the bogs of Connemara, by Mr. Mackay; and, strange to say, it was there in such quantities as to cover entirely a piece of ground, at least two acres in extent.

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GENUS VII.THE ARBUTUS. (ARBUTUS, *Lin.*)~~~~~  
*Lin. Syst.* DECANDRIA MONOGYNIA.GENERIC CHARACTER.—Calyx small, five-parted. Corolla ovate, with a small five-cleft revolute limb. Stamens ten, villous at base; anthers with two pores at the tip. Berry granulated, five-celled, many-seeded. (*Lindley.*)

DESCRIPTION, &c.—The common strawberry tree is the only plant in this genus that is found wild in the British dominions, and it is only found in the rich and romantic scenery round the Lake of Killarney. The name of *Arbutus* is derived from two Celtic words, signifying a rough bush. Though the plant is now only found in Ireland, it would seem to have been formerly in the Highlands of Scotland, as it is the badge of the Highland clan Ross. The plant flowers in September and October, and it often has ripe fruit on at the same time, the berries remaining on the tree more than a year. The fruit is not good to eat; and, indeed, the specific name of *Unedo*, which is given to the plant, and which signifies once eaten, is said to allude to the fruit of the plant being so bad as, when once tasted, to give no desire to taste it a second time.

## GENUS VIII.

THE BEAR-BERRY. (ARCTOSTAPHYLOS, *Kunth.*)*Lin. Syst.* DECANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx small, five-parted. Corolla ovate, with a small five-cleft revolute limb. Stamens ten; smooth; anthers without pores. Berry smooth; seeds solitary. (*Lindley.*)

DESCRIPTION, &c.—This genus was formerly included in *Arbutus*, but it was separated by the eminent German botanist, *Kunth*.

1.—THE BLACK BEAR-BERRY. (ARCTOSTAPHYLOS ALPINA, *Sprengel.*)SYNONYME.—*Arbutus alpina*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 2030; 2nd ed., t. 588.

SPECIFIC CHARACTER.—Stems procumbent. Leaves rugged, serrated.

Clusters terminal. (*Smith.*)

DESCRIPTION, &c.—This pretty dwarf shrub is very common in the western islands of Scotland, and the Highlands. The plant is not an evergreen, and the leaves change to a bright red before they fall off. The flowers, which are white, slightly tinged with pink, appear in May, and they are succeeded by black berries, which are good to eat.

2.—THE RED BEAR-BERRY. (ARCTOSTAPHYLOS UVA URSI, *Spreng.*)SYNONYME.—*Arbutus Uva ursi*, *Lin.*ENGRAVINGS.—Eng. Bot., t. 714; 2nd ed., t. 589; and our *fig. 7*, in Pl. 44.

SPECIFIC CHARACTER.—Stems procumbent. Leaves obovate, entire.

Clusters terminal. (*Smith.*)

DESCRIPTION, &c.—A beautiful little evergreen shrub, with long trailing branches, leathery leaves reticulated below, and terminal clusters of flowers, which appear in May. The berries are red, and though they are very austere, they are eaten by the moor-fowl. The whole plant is astringent.

## CHAPTER LVII.

THE WINTER-GREEN FAMILY. (PYROLEAE, *Lindley.*)

CHARACTER OF THE ORDER.—Calyx five-leaved, persistent, inferior. Corolla monopetalous, hypogynous, regular, deciduous, four or five-toothed, with an imbricated aestivation. Stamens hypogynous, twice as numerous as the divisions of the corolla; anthers two-celled, opening longitudinally, and furnished with appendages at the base. Ovarium superior, four or five-celled, many-seeded, with an hypogynous disk; style one, straight or declinate; stigma simple. Fruit capsular, four or

five-celled, dehiscent, with central placentæ. Seeds indefinite, minute, winged; embryo minute, at one extremity of a fleshy albumen.—Herbaceous plants, rarely under-shrubs, sometimes parasitical and leafless. Stems round, covered with scales; in the frutescent species leafy. Leaves either wanting or simple, entire or toothed. Flowers in terminal racemes, rarely solitary. (*Lindley.*)

DESCRIPTION, &c.—This is a small order, containing only two genera of British plants. They are both placed in the Linnæan class and order Decandria Monogynia, from each having ten stamens and a single style.

## GENUS I.

THE WINTER-GREEN. (PYROLA, *Lin.*)*Lin. Syst.* DECANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-cleft or five-parted. Petals five, cohering very slightly at the base. Style longer than the stamens. Stamens ten, subulate. Capsule five-celled, dehiscing at the angles of the base.—Herbaceous plants, with evergreen entire leaves, rarely leafless. Scapes simple. Flowers white or pink, unilateral. (*Lindley.*)

DESCRIPTION, &c.—There are several species of this genus, but they bear such a striking resemblance to each

other, that it will only be necessary to describe one species. The name of *Pyrola* is said to be derived from *Pyrus*, a pear, from some fancied resemblance between the leaves of these plants and those of the pear-tree.

### 1.—THE ROUND-LEAVED WINTER-GREEN. (*PYROLA ROTUNDIFOLIA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 213; 2nd ed., t. 581; and our fig. 8, in Pl. 44. Stamens ascending. Style twice as long, declining and recurved. Cluster many-flowered. Calyx as long as the stamens. (*Lindley.*)

SPECIFIC CHARACTER.—Leaves obovate, rounded, slightly crenelled.

DESCRIPTION, &c.—This very pretty little plant is seldom found wild in Great Britain except in the mountainous woods of the north. It is the largest of the genus. It is a perennial, and flowers in July and August. *P. media*, and *P. minor* are probably only varieties of this species.

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### THE SERRATED WINTER-GREEN. (*P. SECUNDA, Lin.*)

This is a very distinct species, with greenish-white flowers, which are produced only on one side of the somewhat procumbent and straggling stem. It is only found in pine woods in the alpine districts of Scotland, and it flowers in July.

### THE SINGLE-FLOWERED WINTER-GREEN. (*P. UNIFLORA, Lin.*)

This is also a very distinct species, as the flowers are produced singly, instead of being in clusters. They are also very fragrant, and though white, they differ from those of the other species in being delicately veined with pink. The plant is a perennial, and it flowers in July.

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## GENUS II.

### THE BIRD'S-NEST. (*MONOTROPA, Lin.*)

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#### *Lin. Syst. DECANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Sepals four or five, coloured. Petals four or five, slightly cohering by the base. Stamens eight or ten. Style simple, cylindrical. Capsule with four or five cells, and four or five valves, many-seeded. Herbaceous parasitical plants, with leafless scaly stems. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species in this genus. The name of *Monotropa* is derived from two Greek words signifying one turn, from the flowers all pointing one way.

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### 1.—THE YELLOW BIRD'S-NEST. (*MONOTROPA HYPOXYLUS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 69; 2nd ed., t. 580; and our fig. 9, in Pl. 44.

SPECIFIC CHARACTER.—Flowers in a drooping cluster; lateral ones with eight stamens; terminal one with ten. (*Smith.*)

DESCRIPTION, &c.—This very curious plant vegetates only on the roots of beech and pine trees. It is a perennial, and produces its raceme of dingy yellow flowers in June and July. These flowers, when they first expand, droop on one side, but they afterwards become erect. When dry, they acquire a faint smell, somewhat resembling that of the common primrose.

## CHAPTER LVIII.

THE DOG'S-BANE FAMILY. (APOCYNEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Calyx divided in five, persistent, inferior. Corolla monopetalous, hypogynous, regular, five-lobed, deciduous, with an imbricated aestivation. Stamens five, inserted upon the corolla, alternate with the segments of the limb. Filaments distinct. Anthers two-celled, opening longitudinally. Pollen granular, applied immediately to the stigma. Ovaries two, or one with two cells, usually

many-seeded; styles two or one; stigma one. Fruit follicular, capsular, drupaceous, or berried, double or single. Seeds usually containing albumen; embryo leafy; plumula inconspicuous. Trees or shrubs, generally flowing with milk. Leaves opposite, sometimes whorled, sometimes scattered, quite entire, generally hairy; fringes or glands between the petioles. Inflorescence somewhat corymbose. (R. Br.)

DESCRIPTION, &c.—The only genus of British plants belonging to this order is the Periwinkle.

## GENUS I.

THE PERIWINKLE. (VINCA, *Lin.*)

*Lin. Syst. PENTANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx five-parted. Corolla hypocrateriform; the tube long, the orifice prominent, five-angled, the limb flat, bluntly five-lobed. Anthers converging. Style one. Stigma capitate, with a ring at the base. Seeds naked. (Dec.)

DESCRIPTION, &c.—There are only two species of this genus. The name of *Vinca* is derived from the Latin word *vincio* to bind, as the trailing stems seize upon and bind together the objects in their neighbourhood. The genus is placed in the Linnæan class and order Pentandria Monogynia, from its five stamens and its single style.

1.—THE LESSER PERIWINKLE. (VINCA MINOR, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 917; 2nd ed., t. 293; and our fig. 1, in Pl. 45. late, smooth-edged. Flowers stalked. Segments of the calyx lanceolate. (Smith.)

SPECIFIC CHARACTER.—Stems procumbent. Leaves elliptic-lanceo-

DESCRIPTION, &c.—This plant is an evergreen perennial, and when it is found wild in Britain, it only grows on banks in bushy places. The wood of the shoots is very tough, and the habit of the plant more binding than that of the larger species. There is a variety with variegated leaves, and both it and the species flower in April and May.

THE GREATER PERIWINKLE. (V. MAJOR, *Lin.*)

This species is found much oftener in a wild state than the other kind, and it flowers rather later. The leaves are fringed instead of being smooth, the flowers are longer, and the stems more erect and shrubby, and less tough. This plant in France is consecrated *Aux doux souvenirs*, from Rousseau's notice of it in his "Confessions." He says, that once, when walking with Madame de Warens, she exclaimed, "Ah, there is the periwinkle in flower!" Rousseau, who had never before noticed the flower, stooped to examine it, and it became so indelibly impressed on his memory, that though he did not see it again for thirty years, he recognised it instantly, and he relates how forcibly all the tender emotions of the moment when he first saw it rushed back on his memory.

## CHAPTER LIX.

THE GENTIAN FAMILY. (GENTIANEE, *Juss.*)

CHARACTER OF THE ORDER.—Calyx monophyllous, divided, inferior, persistent. Corolla monopetalous, hypogynous, usually regular, withering or deciduous; the limb divided, equal, its lobes of the same number as those of the calyx, generally five, sometimes four or eight, with an imbricated aestivation. Stamens inserted upon the corolla, equal in number to the segments, and alternate with them; some of them occasionally abortive. Ovarium single, one or two-celled, many-seeded. Styles one or two, either partially or wholly cohering. Stigmas one or two. Capsule,

or berry, many-seeded, with one or two cells, generally two-valved; the margins of the valves turned inwards, and in the genera with one cell, bearing the seeds; in the two-celled genera inserted into a central placenta. Seeds small; embryo straight in the axis of fleshy albumen; radicle next the hilum. Herbaceous plants, seldom shrubs, generally smooth. Leaves without stipulae. Flowers terminal or axillary. (*R. Br.*)

DESCRIPTION, &c.—Several genera are included in this order, but most of the plants are so small, or resemble each other so much, as to be little noticed. Most of them, however, are beautiful.

§ 1.—*Gentianee*. Leaves opposite, entire.

## GENUS I.

GENTIANELLA. (EXACUM, *Lin.*)

*Lin. Syst.* TETRANDRIA MONOGYNIA.

DESCRIPTION, &c.—There is only one plant in this genus—an insignificant little annual, with yellow flowers, found only in the south-west of England.

## GENUS II.

THE CENTAURY. (ERYTHRÆA, *Ren.*)

*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-eleft. Corolla funnel-shaped, withering, with a short limb. Stamens five. Anthers, when burst, becoming spiral. Style erect. Stigmas two, roundish. Capsule linear. (*R. Br.*)

DESCRIPTION, &c.—This genus contains four species, or one species and three varieties. The name of *Erythraea* is taken from the Greek word for red, in allusion to the colour of the flowers.

1.—THE LESSER CENTAURY. (ERYTHRÆA CENTAURIUM, *Pers.*)

SYNONYMES.—*Chironia Centaurium*, *Curtis*; *Gentiana Centaurium*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 417; 2nd ed., t. 320.

SPECIFIC CHARACTER.—Stem nearly simple. Panicle forked, corymbose. Leaves ovate-lanceolate. Calyx half the length of the tube; its segments partly combined by a membrane. (*Smith.*)

DESCRIPTION, &c.—This pretty little plant is only found in dry gravelly or chalky soils. It is an annual, which flowers nearly all the summer, its small pink blossoms opening in sunshine, but closing before rain, or as soon as they are gathered. The herb is very bitter, and it is used by country people as a tonic. The dwarf-tufted Centaury (*E. littoralis*), *E. latifolia*, and *E. pulchella*, are probably only dwarf varieties of the common kind. All the kinds are annual or biennial, dying as soon as they have perfected their seeds.

## GENUS III.

THE GENTIAN. (GENTIANA, *Lin.*)*Lin. Syst. PENTANDRIA DIGYNIA.*

GENERIC CHARACTER.—Calyx four or five-cleft. Corolla funnel-shaped, or hypocrateriform, four or five-cleft, with the orifice naked. Stamens five. Stigma two-lobed. Seed not bordered. (*R. Br.*)

DESCRIPTION, &c.—All the Gentians are beautiful herbaceous plants, and all are intensely bitter in taste, and powerfully tonic in quality. The genus takes its name from Gentius, King of Illyria, who, according to Pliny, was the first who discovered the medicinal properties of *G. lutea*, a species which is not a native of Great Britain, but the roots of which are imported largely by the druggists for their strengthening properties.

1.—THE MARSH GENTIAN, OR CALATHIAN VIOLET. (GENTIANA PNEUMONANTHE, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 20; 2nd ed., t. 373.

SPECIFIC CHARACTER.—Corolla bell-shaped, five-cleft. Flowers stalked. Leaves linear. (*Smith.*)

DESCRIPTION, &c.—This beautiful plant is generally found on moist heaths in the north of England, but it is not very abundant. It is a perennial, and it flowers in August. Its flowers are of a brilliant dark blue, with a yellow stripe up each segment of the corolla. The leaves are linear.

THE DWARF GENTIAN. (G. ACAULIS, *Lin.*)

This brilliant little plant only grows a few inches from the ground, but the intense brightness of its blue never fails to excite admiration wherever it is seen. It is a perennial, and flowers in June and July. It is probably not a true native.

THE SPRING GENTIAN. (G. VERRNA, *Lin.*)

This is another brilliant blue flower, with four distinct curiously-shaped petals, and dense tufts of radical leaves. It is found chiefly in Teesdale Forest, Durham. It is a perennial, and flowers in April.

THE DWARF ALPINE GENTIAN. (G. NIVALIS, *Lin.*)

This is quite a miniature plant, which is only found on the summit of the highest mountains in Scotland, close to the limits of the perpetual snow. It is an annual, and flowers in August.

THE AUTUMNAL GENTIAN. (G. AMARELLA, *Lin.*)

This species has not the beautiful blue that distinguishes the other kinds. It is only found in pastures on calcareous soils. It is an annual, and flowers in August and September,

THE FIELD GENTIAN. (G. CAMPESTRIS, *Lin.*)

This is the commonest of all the British species, but it is never found on calcareous soils, and generally grows near the sea. It is an annual, and flowers in September. The bitter of this species is so aromatic, that, in Sweden, it is frequently used instead of hops.

## GENUS IV.

THE MARSH FELWORT. (SWERTIA, *Lin.*)*Lin. Syst. PENTANDRIA DIGYNIA.*

DESCRIPTION, &c.—This plant is a very doubtful native, as it was only found once in Wales, and had probably been thrown from some garden. I have not, therefore, thought it necessary to describe it at length.



1 Lesser Periwinkle 2 Common Buck-bean 3 Fringed buck-bean 4 Woodsy Nightshade



GENUS V.  
THE YELLOW CENTAURY. (CHLORA, *Lin.*)

*Lin. Syst.* OCTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx eight-parted. Corolla hypocrateriform; the tube short, the limb eight-parted. Stamens eight, very short, inserted in the orifice. Style one. Stigma four-cleft. Capsule one-celled. (*Lindley.*)

DESCRIPTION, &c.—There is only one species in this genus, the common Yellow Centaury, or Yellow Wort (*Chlora perfoliata*). It is a curious plant, with brilliant yellow flowers, which are large and showy, and blue-green foliage, the leaves being perfoliate, that is, appearing as though the stalk went through them. It is found abundantly in the southern and midland counties of England, wherever the soil is calcareous, but seldom elsewhere. The name of *Chlora* is from a Greek word signifying a glaucous green. The plant is an annual, and it flowers in July and August.

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§ 2.—*Menyanthes*. Leaves alternate, usually toothed or divided.

GENUS VI.  
THE BUCK-BEAN. (MENYANTHES, *Lin.*)

*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-parted. Corolla funnel-shaped; limb spreading, five-parted, bearded internally, with a simple margin. Stamens five. Style one. Stigma capitate, with from two to five

furrows. Glands five, hypogynous, alternate with the stamens. Capsule one-celled, two-valved; the valves bearing the seed in their axis. Leaves ternate. (*Lindley.*)

DESCRIPTION, &c.—There is now only one British species in this genus. The name of *Menyanthes* is derived from two Greek words signifying monthly flower, because, as Sir James Edward Smith asserts, the flowers last a month.

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1.—THE COMMON BUCK-BEAN. (MENYANTHES TRIFOLIATA, *Lin.*)

SYNONYMES.—The Bog-bean; the Marsh Trefoil.

GRAVINGS.—Eng. Bot., t. 495; 2nd ed., t. 280; and our *fig.* 2, in Pl. 45.

SPECIFIC CHARACTER.—Leaves ternate. Disk of the corolla densely shaggy. (*Smith.*)

DESCRIPTION, &c.—This is a marsh plant, which is common in every part of Great Britain, and which produces its very pretty flowers in June and July. It is a perennial, with a long round root, and a very bitter herb. A decoction of this plant is a powerful sudorific, and it was formerly thought a sure cure for rheumatism and many other diseases.

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GENUS VII.  
THE FRINGED BUCK-BEAN. (VILLARSIA, *Vent.*)

*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-parted. Corolla somewhat rotate, the limb spreading, five-parted, smooth in the disk, bearded or scaly at the base, with an inflexed margin. Stamens five, alternate with the segments. Style one. Stigma two-lobed; the lobes toothed.

Glands five, hypogynous, alternate with the stamens. Capsule one-celled, two-valved, many-seeded (in the floating species indehiscent) the valves bearing the seed in their axis. Leaves simple. (*R. Br.*)

DESCRIPTION, &c.—There is only one British species in this genus, and that was formerly included in

Menyanthes. The name of *Villarsia* was given in honour of a French botanist, named Villars, who wrote the *Flore du Dauphiné*.

1.—THE COMMON FRINGED BUCK-BEAN. (*VILLARSIA NYMPHEOIDES*, *Vent.*)

SYNONYME.—*Menyanthes nymphæoides*, *Smith.*

ENGRAVINGS.—*Eug. Bot.*, t. 217; 2nd ed., t. 281; and our *fig. 3*, in *Pl. 45.*

SPECIFIC CHARACTER.—Leaves heart-shaped, wavy at the edges, floating. Corolla fringed. (*Smith.*)

DESCRIPTION, &c.—This beautiful aquatic plant is frequently found in the Thames, in little quiet corners, out of the current of the main stream. The root is long and stringy, and the leaves succulent, but they transpire so freely, that when gathered they dry in a few hours. The plant is a perennial, and it flowers in August.

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CHAPTER LX.

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THE NIGHTSHADE FAMILY. (*SOLANÆ*, *Juss.*)

CHARACTER OF THE ORDER.—Calyx five-parted, seldom four-parted, persistent, inferior. Corolla monopetalous, hypogynous; limb five-cleft, seldom four-cleft, regular, or somewhat unequal, deciduous; the aestivation, in the genuine genera of the order, plaited; in the spurious genera, imbricated. Stameus inserted on the corolla, as many as the segments of the limb, with which they are alternate; one sometimes being abortive. Pericarpium with two or four cells, either a capsule

with a double dissepiment parallel with the valves, or a berry, with the placentæ adhering to the dissepiment. Seeds numerous, sessile. Embryo more or less curved, often out of the centre, lying in fleshy albumen; radicle next the hilum. Herbaceous plants or shrubs. Leaves alternate, undivided, or lobed; the floral ones sometimes double, and placed near each other. Inflorescence variable, often out of the axillæ; the pedicels without bractæ. (*R. Br.*)

DESCRIPTION, &c.—This order contains several well-known genera, most of which are poisonous in their fruit, though some part of them may be used either as food, or medicinally.

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GENUS I.

THE THORN-APPLE. (*DATURA*, *Lin.*)

*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx tubular, ventricose, with five angles, five-toothed, deciduous, leaving behind a broad orbicular base. Corolla funnel-shaped; the tube long; the limb with five angles, five plaited, and five points. Stamens five. Stigma of two plates. Capsule echinate or smooth, two-celled; the cells divided occasionally by spurious dissepiments. (*Lindley.*)

DESCRIPTION, &c.—The Common Thorn-Apple (*D. Stramonium*, *Lin.*) is the only species of this genus that is a native of Great Britain; but this plant is common on waste heaps and dunghills. It is an annual, and flowers in July; the flowers, which are large and white, being sweet-scented, though the leaves and stem of the plant have a most disagreeable smell. The leaves and stem are, however, often dried, and smoked as tobacco, to relieve diseases of the chest. Fomentations are also made from the leaves. The word *Datura* is derived from the Arabic name of the plant.

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GENUS II.

THE HENBANE. (*HYOSCYAMUS*, *Lin.*)

*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx tubular, five-cleft. Corolla funnel-shaped; the limb spreading, obliquely five-lobed, unequal. Stamens five. Stigma capitate. Capsule compressed, furrowed on each side, opening at the apex by a transverse aperture. (*Lindley.*)

DESCRIPTION, &c.—The Common Henbane (*H. niger*, *Lin.*) is found abundantly in waste ground near

villages, particularly in dry places. It is an annual, and it flowers in July. It is sticky to the touch when gathered, and has a most unpleasant smell. When taken carelessly it is a deadly poison, but it is used in medicine. The flowers are of a pale yellow delicately veined with brown, and are ornamental. The name of *Hyoscyamus* is derived from two Greek words signifying Hog's-bean.

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### GENUS III.

#### THE MULLEIN. (VERBASCUM, *Lin.*)

*Lin.* *Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-parted. Corolla rotate, five-lobed, unequal. Stamens five, unequal; filaments declinate, almost always villous at the base. Capsule with two valves, ovate, or globose. (*Dec.*)

DESCRIPTION, &c.—This genus is a very extensive one, but the plants resemble each other so much as scarcely to need any separate description. The name of *Verbascum* is said to be altered from *Barbascum*, from *barba* a beard, in allusion to the shaggy nature of the foliage, or from the bearded stamens.

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#### 1.—THE GREAT MULLEIN, OR SHEPHERD'S-CLUB. (VERBASCUM THAPSUS, *Lin.*)

SYNONYMES.—Hag's Taper; High Taper; Flannel Plant; Cow's Lungwort; Murrein Grass.

SPECIFIC CHARACTER.—Leaves decurrent, crenate, woolly on both sides. Stem simple. Cluster dense. Flowers almost sessile. (*Smith.*)

ENGRAVINGS.—Eng. Bot., t. 549; 2nd ed., t. 309.

DESCRIPTION, &c.—This well-known plant was formerly in high estimation for its various qualities in medicine, and it is still thought efficacious in diseases of the lungs, particularly for cattle. It is also said to have been used by witches in their incantations, and hence its popular name of Hag's Taper. It is found abundantly on waste ground in every part of Great Britain, but it is most common in gravelly or calcareous soils. It is a biennial, and it flowers in July and August. It is called flannel plant, from the feel of its leaves.

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#### THE WHITE MULLEIN (V. LYCHNITIS, *Lin.*)

This species is only found in chalky soil; and it is remarkable for its large, branching, erect racemes of very pale yellow or cream-coloured flowers, which appear in July and August, as do those of all the other species.

#### THE HYBRID MULLEIN. (V. THAPSIFORME, *Schrad.*)

This is supposed to be a cross between the Great Mullein and the White Mullein, as it was first found in 1761, in a bed of those plants.

#### THE HOARY MULLEIN. (V. PULVERULENTUM, *Villars.*)

The flowers of this species are of a brilliant yellow, and the leaves are covered with a white mealy down. When the flower-stem is struck sharply, the petals of the flowers will all fall off together, and the calyx will close over the pistil. The mealy down on the leaves (which are often a foot long) is easily displaced with the finger, and, when examined with a microscope, it is found to consist of a great number of starry tufts, curiously entangled together.

#### THE BLACK MULLEIN. (V. NIGRUM, *Lin.*)

This species is seldom found in Scotland. It is a perennial, with yellow flowers, and very dark-green leaves, which sometimes look almost black; and hence the specific name of the species.

THE LARGE-FLOWERED MULLEIN. (*V. VIRGATUM*, *Withering.*)

This very handsome species grows five or six feet high, with an immensely thick stem, and large yellow flowers. It is a biennial, and is rather rare.

THE MOTH MULLEIN. (*V. BLATTARIA*, *Lin.*)

The flowers of this species are rather small, but of a beautiful yellow, and very elegant form. It is an annual, and it is most abundant in Cornwall and Devonshire. It produces a succession of flowers from July to November.

## GENUS IV.

THE NIGHTSHADE. (*SOLANUM*, *Lin.*)

*Lin. Syst. PENTANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx persistent, with from five to ten or six. Anthers oblong, opening by two pores at the apex. Berry divisions. Corolla monopetalous, rotate; the tube very short; the limb spreading, with four, five, or six divisions. Stamens four, five,

DESCRIPTION, &c.—This genus is remarkable from the peculiarity of its containing the potato, so well known as an article of food, and the poisonous berries of the different kinds of Nightshade. The name of *Solanum* is of doubtful origin, though some suppose it to allude to the solace afforded by the nourishment contained in the tuberous root of the potato. The two British species, however, are both poisonous.

1.—THE BITTER-SWEET, OR WOODY NIGHTSHADE. (*SOLANUM DULCAMARA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 365; 2nd ed., t. 318; and our *fig. 4*, in Pl. 45.

SPECIFIC CHARACTER.—Stem shrubby, zigzag, without thorns. Upper leaves hastate. Clusters cymose. (*Smith.*)

DESCRIPTION, &c.—This very elegant climbing shrub is common in hedges in moist places, where it produces a succession of flowers and fruit, some of both being on the plant at the same time, from June till September. Every part of this plant is poisonous when taken incautiously, but the root and young branches are used medicinally by those who are well acquainted with their properties. The names of Dulcamara and Bitter-Sweet both allude to the fruit tasting first sweet, and then bitter.

THE GARDEN NIGHTSHADE. (*S. NIGRUM*, *Lin.*)

This species generally grows on dunghills, or other places where the soil is at the same time neglected and rank. It is usually considered an annual, but sometimes it lives two or more years. The flowers, which are white, are produced in succession from June till September; the plant bearing at the same time its berries, which are black, instead of being red, as in the Bitter-Sweet.

## GENUS V.

THE DEADLY NIGHTSHADE. (*ATROPA*, *Lin.*)

*Lin. Syst. PENTANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx campanulate, five-cleft. Corolla campanulate, twice as long as the calyx, five-lobed, equal. Filaments five, filiform. Berry globose, seated in the calyx. (*Dec.*)

DESCRIPTION, &c.—There is only one species in this genus, and that is the Dwale or Deadly Nightshade

(*A. Belladonna*, Lin.). It is a perennial plant, with solitary purple flowers; and its berry is of so poisonous a nature, that half one is said sometimes to prove fatal. The taste is sweetish, and the appearance tempting, so that this berry is perhaps one of the most dangerous of all the British poisons. The only remedies are vinegar, and making the patient walk about; as the poison operates solely on the nerves, and emetics have no effect on it.

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## CHAPTER LXI.

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### THE PRIMROSE FAMILY. (PRIMULACEÆ, *Vent.*)

**CHARACTER OF THE ORDER.**—Calyx divided, five-cleft, seldom four-cleft, inferior, regular, persistent. Corolla monopetalous, hypogynous, regular; the limb five-cleft, seldom four-cleft. Stamens inserted upon the corolla, equal in number to its segments, and opposite to them. Ovary one-celled. Style one. Stigma capitate. Capsule opening with

valves. Placenta central, distinct. Seeds numerous, peltate. Embryo included within fleshy albumen, lying across the hilum; radicle with no determinate direction. Herbaceous plants. Leaves usually opposite, either whorled or scattered. (*R. Br.*)

**DESCRIPTION, &c.**—The Primrose tribe contains not only the Primroses, but several plants which appear very different from that genus and from each other, such as the Moneywort, the Cyclamen, the Pimpernel, and the Water Violet. All the genera contain only herbaceous plants, with usually opposite leaves, and ornamental flowers.

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#### GENUS I.

##### THE CHAFF-WEED. (CENTUNCULUS, *Lin.*)

*Lin. Syst.* TETRANDRIA MONOGYNIA.

**DESCRIPTION, &c.**—This is perhaps the smallest of the British plants. It is an annual, with inconspicuous flowers, and it grows on moist sandy heaths near London, and in other parts of Great Britain and Ireland.

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#### GENUS II.

##### THE CYCLAMEN. (CYCLAMEN, *Lin.*)

*Lin. Syst.* PENTANDRIA MONOGYNIA.

**GENERIC CHARACTER.**—Calyx campanulate, five-cleft. Corolla with the tube ovate; the limb five-parted and reflexed. Stamens five, inserted in the base of the tube. Anthers sessile. Fruit globose, coriaceous, or rather fleshy, many-seeded. (*Lindley.*)

**DESCRIPTION, &c.**—The only British species of this genus is the common Ivy-leaved Cyclamen or Sow-bread (*C. hederifolium*, Willd.), the root of which is tuberous, and which, though it has an acrid taste, is greedily eaten by pigs; from which circumstance the plant takes its vulgar English name of Sow-bread. After flowering, the flower-stalks curl up in a spiral manner, so as to bury the seed-vessels in the ground; and this habit of the plant is supposed to have given rise to the name of *Cyclamen*, which is derived from a Greek word, signifying a circle. This plant is rare in England. It is a perennial, and flowers in April; sometimes, when it grows in a shady situation, flowering a second time in autumn.

## GENUS III.

THE BLACK SALTWORT, OR SEA-MILKWORT. (GLAUX, *Lin.*)*Lin. Syst.* PENTANDRIA MONOGYNIA.

DESCRIPTION, &c.—There is only one species in this genus (*G. maritima*, *Lin.*). This is a fleshy plant, with opposite leaves, and a coloured calyx, which forms a pretty cream-coloured flower. It is extremely common in salt marshes, where it spreads rapidly by means of its creeping roots. The plant is a perennial, flowering in June and July. It has a salt taste, and cows are not only very fond of it, but it is said to make them produce abundance of milk ; and hence its popular English name of Sea-Milkwort.

## GENUS IV.

THE PRIMROSE. (PRIMULA, *Lin.*)*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-toothed. Corolla hypocrateriform ; the limb five-lobed, usually emarginate ; the orifice dilated ; the tube taper, as long as the calyx or longer. Anthers usually tapering to the point. Capsule ovate, dehiscing at the apex, with five or ten teeth. Seeds minute, very numerous. (*Lindley.*)

DESCRIPTION, &c.—This genus contains many beautiful and well-known plants. They are all perennials, with showy flowers growing in umbels on long stalks from tufts of leaves close to the ground. The name of *Primula* is derived from the Latin word *primus*, in allusion to these plants being some of the first flowers of spring.

1.—THE COMMON PRIMROSE. (PRIMULA VULGARIS, *Hudson.*)SYNONYME.—*P. acaulis*, *Jacq.*ENGRAVINGS.—Eng. Bot., t. 4; 2nd ed., t. 275; and our *fig.* 1, in Pl. 46.SPECIFIC CHARACTER.—Leaves obovate-oblong, toothed, wrinkled. Stalks single-flowered. Limb of the corolla flat. (*Smith.*)

DESCRIPTION, &c.—The common Primrose is one of the most beautiful flowers of early spring, and few flowers have been greater favourites with the poets. The following lines are by Carrington :—

“ A smiling knot  
Of early Primroses, upon the warm,  
Luxuriant, southern bank, appears  
Amid the sunny luxury of grass.”

Shakespeare makes the Primrose a funeral flower for youth :—

“ With fairest flowers,  
Whilst summer last, and I live here, Fidele,  
I'll sweeten thy sad grave : thou shalt not lack  
The flower that's like thy face, pale Primrose.”

The Primrose is a perennial, and it flowers in April.

2.—THE OXLIP. (PRIMULA ELATIOR, *Withering.*)

ENGRAVINGS.—Eng. Bot., t. 513; 2nd ed., t. 276; and our *fig.* 2, in Pl. 46.

SPECIFIC CHARACTER.—Leaves toothed, wrinkled, contracted to-

wards the middle. Stalk many-flowered. Limb of the corolla flat. (*Smith.*)

DESCRIPTION, &c.—The Oxlip is much less frequent than either the Primrose or the Cowslip ; and it is

generally supposed to be the wild form of the Polyanthus. The Oxlip is a perennial, flowering in April; and it is generally found growing in woods and thickets where the plants form a shade and the ground is somewhat moist. It appears to be the connecting link between the Primrose and the Cowslip, as it has the flower and fragrance of the one, and the long-stalked umbel of the other.

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3.—THE COWSLIP. (*PRIMULA VERIS, Lin.*)

**SYNONYMES.**—*P. officinalis, Jacq.*; Paigle.  
**ENGRAVINGS.**—Eng. Bot., t. 5; 2nd ed., t. 277; and our *fig. 3*, in Pl. 46.

**SPECIFIC CHARACTER.**—Leaves toothed, wrinkled, contracted towards the middle. Stalk many-flowered. Limb of the corolla concavc. (*Smith.*)

**DESCRIPTION, &c.**—The Cowslip is abundant on every bank in early spring, though it prefers a clay soil, and an open situation. The beauty of the flowers have long made the plant a favourite with the poets, and the following verses addressed to Cowslips are by Mrs. Howitt:—

“ Oh ! fragrant dwellers of the lea,  
 When first the wild wood rings  
 With each sound of vernal minstrelsy,  
 When fresh the green grass springs ;

“ What can the blessed spring restore  
 More gladdening than your charms ?  
 Bringing the memory once more  
 Of lovely fields and farms.”

Clare, the Northamptonshire poet, celebrates them in the following lines:—

“ Bowing adorers of the gale,  
 Ye Cowslips, delicately pale,  
 Upraise your loaded stems ;  
 Unfold your cups in splendour—speak !  
 Who decked you with that ruddy streak  
 And gilt your golden gems ?”

And Milton speaks of—

“ Cowslips wan, that hang the pensive head.”

The Cowslip is a perennial, and it flowers in April and May. It is used, as is well known, to make wine, and its qualities are said to be slightly soporific.

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4.—THE BIRD'S-EYE, OR MEALY PRIMROSE. (*PRIMULA FARINOSA, Lin.*)

**ENGRAVINGS.**—Eng. Bot., t. 6; 2nd ed., t. 278.  
**SPECIFIC CHARACTER.**—Leaves toothed, even; powdery beneath.

Limb of the corolla flat; mouth with a notched border. Stigma undivided. (*Smith.*)

**DESCRIPTION, &c.**—This beautiful little plant is only found in moist meadows, and by the side of mountain torrents in the north of England and south of Scotland. It is a perennial, and it flowers in June and July.

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5.—THE SCOTTISH PRIMROSE. (*PRIMULA SCOTICA, Hook.*)

**ENGRAVINGS.**—Eng. Bot. Supp., t. 2608; 2nd ed., t. 278\*; and our *fig. 4*, in Pl. 46.

both sides. Limb of the corolla flat; mouth with a notched border. Stigma five-cleft. (*Smith.*)

**SPECIFIC CHARACTER.**—Leaves finely toothed, even; powdery on

**DESCRIPTION, &c.**—Nothing can more closely resemble a miniature Auricula than this elegant little plant, which is only found in the north of Scotland. The leaves and stems are both powdery, and the flowers very small. The plant is a perennial, and it flowers in July.

## GENUS V.

THE LOOSE-STRIFE. (LYSIMACHIA, *Lin.*)*Lin. Syst.* PENTANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx five-parted. Corolla rotate, five-cleft. Stamens five. Capsule globose, with five or ten valves. (R. Br.)

DESCRIPTION, &c.—The plants belonging to this genus differ considerably in their habits of growth, some of the plants growing erect, with the flowers in clusters, and others being trailing or creeping plants, with their flowers produced singly. The name of Lysimachia is derived from Lysimachus; and that of Loose-strife alludes to the belief that was formerly entertained that a decoction of this herb would make the wildest beasts tame, and prevent them from fighting each other. The species are divided into two sections.

§ 1.—*Stalks many-flowered.*1.—THE GREAT YELLOW LOOSE-STRIFE. (LYSIMACHIA VULGARIS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 761; 2nd ed., t. 283.

SPECIFIC CHARACTER.—Clusters panicled, terminal. Leaves ovate-lanceolate, acute. (Smith.)

DESCRIPTION, &c.—This very handsome plant is a native of shady watery places, and the banks of rivers, where it rears its tall erect stem above the tufts of reeds among which it grows. It is a perennial, and flowers in July; and as it has a creeping underground stem, it is easily propagated. It grows in gardens in dry soil, notwithstanding the moist situations in which it is always found in a wild state.

THE TUFTEO LOOSE-STRIFE. (L. THYRSIFLORA, *Lin.*)

This species is common in Scotland, but very rare in England. It is a perennial, growing about two feet high, and producing its small speckled yellow flowers all the summer.

§ 2.—*Stalks single-flowered.*2.—THE WOOD LOOSE-STRIFE, OR YELLOW PIMPERNEL. (LYSIMACHIA NEMORUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 527; 2nd ed., t. 285; and our fig. 5, in Pl. 46.

SPECIFIC CHARACTER.—Leaves ovate, acute. Flowers solitary. Stem procumbent. Stamens smooth. (Smith.)

DESCRIPTION, &c.—This graceful and elegant little plant is often found hanging about the trees or covering the banks in moist shady groves, where it flowers from May to September. It is a perennial.

3.—MONEYWORT, OR HERB TWOPENCE. (LYSIMACHIA NUMMULARIA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 528; 2nd ed., t. 286.

SPECIFIC CHARACTER.—Leaves somewhat heart-shaped. Flowers solitary. Stem prostrate, creeping. Stamens glandular. (Smith.)

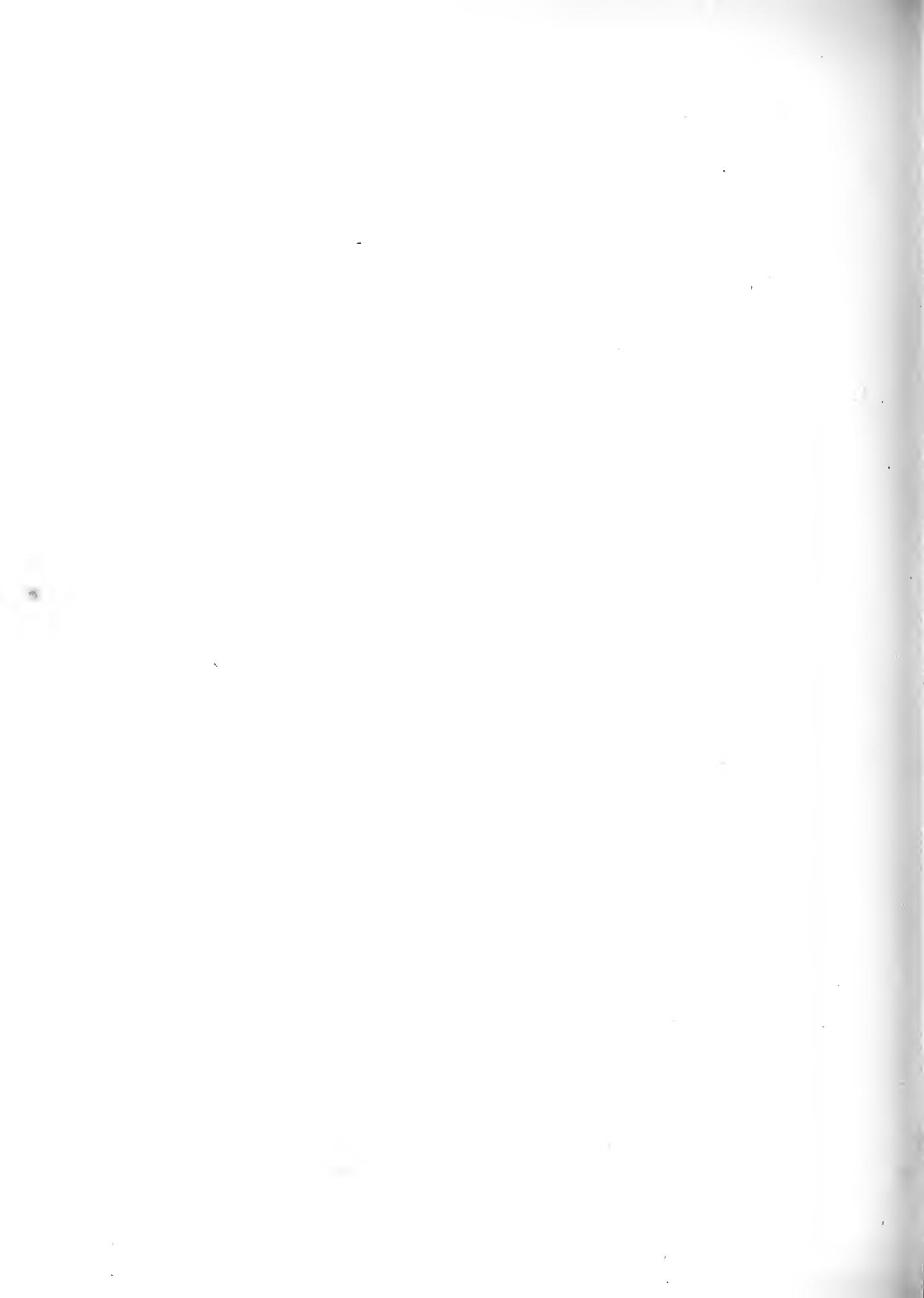
DESCRIPTION, &c.—The Moneywort is found growing on the wet banks of ditches, or creeping over the black boggy or mossy soil of very wet meadows, where it produces abundance of its bright yellow flowers in June and July. It is a perennial, with a creeping stem, that never rises more than a few inches from the ground.

THE FOUR-LEAVED LOOSE-STRIFE. (L. PUNCTATA, *Lin.*)

This is probably only a variety of *L. vulgaris*, which it closely resembles.



1 Common Primrose 2 Oxlip 3 Cowslip 4 Scottish Primrose 5 Wood Loosestrife  
 or Yellow Pimpernel 6 Scarlet Pimpernel 7 Large-flowered Butterwort  
 8 Bladderwort or Common Hooded Milfoil.



## GENUS VI.

THE WATER-VIOLET. (*HOTTONIA, Lin.*)*Lin. Syst. PENTANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx five-parted. Corolla with a short tube, and a flat five-lobed limb. Stamens five, nearly sessile. Capsule globose, crowned with the long persistent style. (Dec.)

DESCRIPTION, &c.—There is only one British species in this genus, viz. the Water Feather-Foil, or Common Water-Violet (*Hottonia palustris*, Lin.), and it is found in clear ditches and ponds in almost every part of England. The leaves are constantly under water, and they are so deeply cut, as to appear like a plume of feathers. The flowers are rather handsome, and of a delicate pink. The long fibrous roots of this plant penetrate deeply into marshy soil, and runners are thrown out from the crown of the root like those of the Strawberry. The plant is a perennial, and it flowers in June. The genus is placed in the Linnaean class and order Pentandria Monogynia, because it has five stamens and a single style; and the name of Hottonia is given to it in honour of a Dutch botanist called Hotton.

## GENUS VII.

THE PIMPERNEL. (*ANAGALLIS, Lin.*)*Lin. Syst. PENTANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx five-parted. Corolla rotate, five-lobed. Capsule globose, dehiscing by a transverse incision. (Lindley.)

DESCRIPTION, &c.—The species belonging to this genus are all elegant little plants, with ornamental flowers and square stems. The name of *Anagallis* is from the Greek word for laughing, but why it is given to this genus is not certain. It is placed in the same Linnaean class and order as *Hottonia*.

I.—THE SCARLET PIMPERNEL, OR SHEPHERD'S WEATHER-GLASS. (*ANAGALLIS ARVENSIS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 529; 2nd ed., t. 287; and our fig. 6, in Pl. 46.

SPECIFIC CHARACTER.—Leaves ovate, dotted beneath. Stem procumbent. Corolla minutely notched. (Smith.)

DESCRIPTION, &c.—The Scarlet Pimpernel is one of the prettiest of the British flowers; and though it is so common as to be found in every place where weeds are permitted to spring up, it has yet found favour with the poets, who have noticed its flowers closing before rain.

“Closed is the pink-eyed Pimpernel,  
‘Twill surely rain; I see with sorrow  
Our jaunt must be put off to-morrow.”—*Dr. Jenner.*

“Of humble growth, though brighter dyes,  
But not by rural swains less prized,  
The trailing stems allure,  
Of Pimpernel, whose brilliant flower  
Closes against the approaching shower,  
Warning the swain to sheltering bower,  
From humid air secure.”—*Moral of Flowers.*

Humble as this little plant appears, there are many things in its botanical construction worthy of attention. When the flowers fade, the stems curl up and bring the seed-vessels near the ground. The seed-vessel itself is

very curious : it first resembles a ball with a little plume on the upper part, but when the seeds ripen, this upper part becomes depressed, and the case divides in the middle ; the part with the plume then falls off, and the seeds which have been packed up into the smallest compass, gradually drop out. The flowers not only close before rain, but generally about two in the afternoon, and they open about seven in the morning. The plant is an annual, and it flowers in June and August.

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THE BLUE PIMPERNEL. (*A. CÆRULEA*, *Schreb.*)

This very pretty little plant is rare in England. The stem is upright, and the flowers, which are very small, are of a dark blue, with red in the centre. It is an annual, generally growing in corn-fields, and it flowers about July.

THE BOG PIMPERNEL. (*A. TENELLA*, *Lin.*)

This species is very different from the others. It has very small roundish leaves, and rather large pink flowers. It is a perennial, and it flowers in July and August, being generally found in wet peaty bogs.

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GENUS VIII.

THE CHICKWEED WINTER-GREEN. (*TRIENTALIS*, *Lin.*)

*Lin. Syst. HEPTANDRIA MONOGYNIA.*

DESCRIPTION, &c.—This little plant, which is rare in England, and only found abundantly in some parts of the Highlands of Scotland, is very interesting in a botanical point of view, as all the parts of its flowers are in sevens, a number extremely rare in the parts of plants. It is the only British species of the Linnaean class Heptandria, from its seven stamens ; and its flowers have generally seven sepals to the calyx, and seven petals to the corolla. The leaves are also generally in a whorl of from four to seven. It has a creeping underground stem, sending up shoots from three to six inches high, which are entirely naked except at the apex, where they bear a whorl of leaves, with elegant white flowers, on long slender stalks, rising from their axils. The plant is a perennial, and it flowers in June. The origin of the name of *Trientalis* is very doubtful ; it is said to mean that the plant is only the third of a foot in height.

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*Related to Primulaceæ.*

GENUS IX.

THE COMMON BROOK-WEED. (*SAMOLUS*, *Lin.*)

*Lin. Syst. PENTANDRIA MONOGYNIA.*

DESCRIPTION, &c.—The common Brook-weed or Water Pimpernel (*S. Valerandi*, *Lin.*), has more the general appearance of a cruciferous plant than one of the Primulaceæ. It is a marsh plant, with a succulent stem, and very small white flowers. It is a perennial, and flowers in July. Having five stamens and a single style, it is placed in the Linnaean class and order Pentandria Monogynia. Some derive the name of *Samolus*, from *Samos* ; and others say that it is compounded of two Greek words, which signify to cure a hog, from this plant being used by the ancients as a remedy for the diseases of swine.

## CHAPTER LXII.

THE BUTTERWORT FAMILY. (LENTIBULARIÆ, *Rich.*)

CHARACTER OF THE ORDER.—Calyx divided, persistent, inferior. Corolla monopetalous, hypogynous, irregular, bilabiate, with a spur. Stamens two, included within the corolla, and inserted into its base. Anthers simple, sometimes contracted in the middle. Ovarium one-celled. Style one, very short. Stigma bilabiate. Capsule one-celled, many-seeded, with a large central placenta. Seeds minute.

Embryo without albumen, sometimes undivided. Herbaeous plants, living in water or marshes. Leaves radical, undivided, or compound, resembling roots, and bearing little vesicles. Seapes with either minute stipula-like scales, or naked; sometimes with whorled vesicles; generally undivided. Flowers single, or in spikes, or in many-flowered racemes. Flowers with a single bracteæ, rarely without bracteæ. (*R. Br.*)

DESCRIPTION, &c.—Perennial marsh plants, with ornamental flowers.

## GENUS I.

THE BUTTERWORT. (PINGUICULA, *Lin.*)

*Lin. Syst. DIANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx campanulate, five-cleft. Corolla two-lipped; the upper three-lobed, the lower two-lobed, shorter and spurred. Stigma bilabiate. (*Lindl.*)

DESCRIPTION, &c.—The plants included in this genus have no proper stems, but the flower-scape of each rises from a tuft of glutinous leaves. These leaves are said to cause the rot in sheep, but, in fact, they are not eaten by sheep, or any kind of cattle, and they will coagulate milk like rennet. Both the stem and leaves bend back if roughly touched, the latter nearly concealing the root when taken up. The name of Pinguicula is from the Latin word *Pinguis*, fat, the leaves being thick and greasy to the touch. The genus is in the Linnæan class and order Diandria Monogynia, from its two stamens and its single style.

1.—THE COMMON BUTTERWORT. (PINGUICULA VULGARIS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 70; 2nd ed., t. 25.

SPECIFIC CHARACTER.—Spur cylindrical, acute, as long as the very irregular petal. Segments of the calyx oblong. Capsule ovate. (*Lindl.*)

DESCRIPTION, &c.—This species is very abundant in bogs in the northern counties; and it is also found in Norfolk and some other places, but more sparingly. The leaves are thick and fleshy, and feel clammy to the touch, their surface being covered by a great number of shining glands containing glutinous matter. The plant is a perennial, and it flowers nearly all the summer.

2.—THE LARGE-FLOWERED BUTTERWORT. (PINGUICULA GRANDIFLORA, *Willd.*)

ENGRAVINGS.—Eng. Bot., t. 2184; 2nd ed., t. 26; and our *fig. 7*, in Pl. 46.

SPECIFIC CHARACTER.—Spur cylindrical, acute, as long as the nearly regular, five-cleft, veiny petal. Segments of the calyx ovate, obtuse. Capsule ovate. (*Lindl.*)

DESCRIPTION, &c.—This species is rare in England, but it is abundant in Ireland. It loses its leaves in winter, and forms numerous little scaly bulbs instead. It is a perennial, and it flowers in May.

THE PALE BUTTERWORT. (P. LUSITANICA, *Lin.*)

This species is abundant in Dorsetshire, and many parts of the West of England. The leaves are delicate, and almost transparent; and both the leaves and stems are covered with hairs, which are tipped with glands. The

plant is a perennial, retaining its leaves all the winter ; and the flowers, which are small and of a very pale lilac, expand in June and July.

THE ALPINE BUTTERWORT. (P. ALPINA, *Lin.*)

The flowers are of a pale yellow, and somewhat larger than those of the preceding species. The plant is a perennial, found only in the North of Scotland, and it flowers from June till September.



GENUS II.

THE HOODED MILFOIL. (UTRICULARIA, *Lin.*)

*Lin. Syst.* DIANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx two-leaved ; the lips equal and undivided. Corolla personate ; the lower lip spurred at the base. Stamens two, the filaments bearing the anthers on their inner face at the top. (*R. Br.*)

DESCRIPTION, &c.—The species of this genus are all aquatic plants, with fibrous floating roots, and of curious construction. “The stem,” says Sowerby, “floats horizontally under water : it is divided into alternate capillary branches, with bristly leaves ; the stem or leaves bearing little compressed bladders, which, during the season of flowering, contain air, at other times water ; so that the flower-spikes, when in bloom, are kept above the water,—a circumstance necessary to the proper action of the pollen,—but sink to ripen the seed. Aquatic insects frequently take up their lodging in these bladders. The flowers appear after Midsummer. Buds formed among the leaves at the ends of the shoots become perfect plants the following season.”—*Eng. Bot.* 2nd edit., vol. i. p. 19.—The name of *Utricularia* is derived from *Utriculus*, a little bladder ; and the genus is placed in the Linnæan class and order Diandria Monogynia, because it has two stamens and a single style.

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1.—THE BLADDERWORT, OR COMMON HOODED MILFOIL. (UTRICULARIA VULGARIS, *Lin.*)

ENGRAVINGS.—*Eng. Bot.*, t. 253 ; 2nd ed., t. 27 ; and our *fig.* 8, Pl. 46.

SPECIFIC CHARACTER.—Spur conical. Stalk straight. Cluster somewhat corymbose. Upper lip of the corolla the length of the palate, reflexed at the sides. (*Smith.*)

DESCRIPTION, &c.—This species is found in ditches and deep standing pools, in various parts of Great Britain. It is a perennial, and it flowers in June.

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THE INTERMEDIATE HOODED MILFOIL. (U. INTERMEDIA, *Hayne.*)

This species is rare, but it has been found both in Ireland and Scotland. The flowers are small and yellow, and they appear in July. The plant is a perennial.

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THE LESSER HOODED MILFOIL. (U. MINOR, *Lin.*)

This species has very small yellow flowers, which appear in July. It is a perennial, and grows in bogs and in ditches near Norwich.

## CHAPTER LXIII.

THE FIGWORT FAMILY. (SCROPHULARINEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Calyx divided, persistent, inferior. Corolla monopetalous, hypogynous, usually irregular, deciduous, with an imbricated aestivation. Stamens two, or four, didynamous, very seldom equal. Ovarium superior, two-celled, many-seeded. Style one. Stigma two-lobed. Fruit capsular, very seldom succulent, with from two to four valves, which are either entire or bifid; the dissep-

ment either double, arising from the incurved margins of the valves; or simple, and in that case, either parallel with or opposite to the valves. Placenta central, either adhering to the dissepiment or separating from it. Seeds indefinite. Embryo included within fleshy albumen; radicle turned towards the hilum. Herbaceous plants, seldom shrubs, with opposite or alternate leaves. Inflorescence very variable. (*Lindley.*)

DESCRIPTION, &c.—The plants belonging to this order are generally ornamental, particularly the Snapdragon and the Foxglove. The Figwort, which gives its name to the order, is, on the contrary, a coarse-growing plant, with comparatively small flowers. The order contains several genera of British plants.

## GENUS I.

THE SPEEDWELL. (VERONICA, *Lin.*)

*Lin. Syst. DIANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Calyx four or five-parted. Corolla rotate; the limb four-parted, unequal, with entire lobes. Stamens two. Capsule either separable in two, or bearing the septa in the middle of the valves. (*Lindley.*)

DESCRIPTION, &c.—There are eighteen or more British species of this genus, nearly all of which are very common weeds. The name of *Veronica* is of doubtful origin. The genus is placed in the Linnæan class and order Diandria Monogynia, from its two stamens and its single style.

\* Clusters or spikes terminal. Root perennial.

1.—THE SPIKED SPEEDWELL. (VERONICA SPICATA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 2; 2nd ed., t. 8; and our *fig. 1*, in Pl. 47.

about the middle only; their base tapering into a footstalk; radical ones obovate. Stem ascending, quite simple. (*Smith.*)

SPECIFIC CHARACTER.—Spike terminal. Leaves bluntly serrated

DESCRIPTION, &c.—This is a plant which grows in patches; great quantities of it being found in one place, and then probably not a single plant of it for miles. The flowers appear at the end of summer, and their brilliant colour makes them much admired.

2.—THE FLESH-COLOURED SHRUBBY SPEEDWELL. (VERONICA FRUTICULOSA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1028; 2nd ed., t. 10; and our *fig. 2*, in Pl. 47.

Leaves elliptic-lanceolate. Stems erect; shrubby below. Capsule ovoid, with four lanceolate valves. (*Smith.*)

SPECIFIC CHARACTER.—Cluster terminal, elongated, many-flowered.

DESCRIPTION, &c.—This species has only been found on the Scotch mountains. It is not truly shrubby, but the roots are woody, and the base of the stem. It flowers in July.

THE WELSH SPEEDWELL. (V. HYBRIDA, *Lin.*)

This plant is very rare, being only found on the side of Craig Wreidhin in Montgomeryshire, and on Humphrey Head in Lancashire. Many doubt whether it is different from *V. spicata*. It grows, however, much

larger, with rougher stem and leaves, the latter being more strongly notched, of a much broader elliptical form, and of a deeper green. The stem generally produces three spikes, and it always grows erect. The plant is a perennial, with a creeping root. Its flowers, which are of a lighter blue than *V. spicata*, and slightly tinged with purple, are produced in July and August.

THE BLUE ROCK SPEEDWELL. (*V. SAXATILIS, Lin.*)

This pretty little plant has rather large blue flowers, which are produced in July. The plant is woody at the base, and has long fibrous roots, which penetrate through fissures in the rocks. It has only been found on the Scotch mountains.

THE ALPINE SPEEDWELL. (*V. ALPINA, Lin.*)

This is a dwarf plant, with very small blue flowers, which are produced in July and August. It is only found in moist places on mountains.

ST. PAUL'S BETONY. (*V. SERPYLLIFOLIA, Lin.*)

This is an inconspicuous plant, with small flowers, which are sometimes purple and sometimes flesh-colour. It is a very common weed in cultivated ground, where its flowers appear in the early part of summer.

\*\* Clusters or spikes lateral. Root perennial.

3.—THE BROOKLIME. (*VERONICA BECCABUNGA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 655; 2nd ed., t. 14.

SPECIFIC CHARACTER.—Clusters lateral. Leaves elliptical, flat. Stem creeping. (*Smith.*)

DESCRIPTION, &c.—This species is abundant in clear ditches and rivulets in every part of Great Britain. It is antiscorbutic, and was formerly much eaten together with Scurvy-Grass and Water-Cresses “to sweeten the blood.” The small purple flowers appear in June and July.

4.—THE GERMANDER. (*VERONICA CHAMÆDRYS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 623; 2nd ed., t. 17; and our *fig. 3*, in Pl. 47.

rugged, deeply serrated. Stem diffuse, with a hairy line at each side. Calyx four-cleft, lanceolate. (*Smith.*)

SPECIFIC CHARACTER.—Clusters lateral. Leaves ovate, sessile,

DESCRIPTION, &c.—This species produces its bright blue flowers in the months of May and June. It is abundant in every part of England on hedge-banks and by the road-sides. The flowers close before rain, and at night.

THE COMMON SPEEDWELL. (*V. OFFICINALIS, Lin.*)

This is a neat little plant, with small purple flowers, which are pink on the back. This species was formerly called the Male Speedwell, and it was occasionally used in country places instead of tea.

There are several other species of *Veronica*, some of which are annuals, but they have all inconspicuous flowers.



1 Spiked Speedwell 2 Flax-colored shrubby Speedwell 3 Germanander 4 Large bushy Yellow Rattle 5 Pasture Lousewort, or dwarf Red Rattle 6 Alpine Bartsia 7 Eye-bright.



## GENUS II.

THE YELLOW RATTLE. (RHINANTHUS, *Lin.*)*Lin. Syst. DIDYNAMIA ANGIOSPERMIA.*

**GENERIC CHARACTER.**—Calyx four-cleft, ventricose. Corolla tubular, two-lipped; the upper lip compressed, the lower flat, and three-lobed. Stamens four, didynamous. Capsule compressed, obtuse, covered by the calyx. Seeds compressed, bordered. (Dec.)

**DESCRIPTION, &c.**—There are only two British species in this genus, both of which have very ornamental flowers. The name of *Rhinanthus* is derived from two Greek words, one signifying a nose and the other a flower, in allusion to the beaked upper lip of the corolla. The genus is placed in the Linnaean class Didynamia, from two of its four stamens being longer than the other two; and in the order Angiospermia, because its seeds are not naked, but inclosed in a distinct capsule. Both the species are annuals.

1.—THE LARGE BUSHY YELLOW RATTLE. (RHINANTHUS MAJOR, *Ehr.*)

**ENGRAVINGS.**—Eng. Bot. Sup., t. 2737; 2nd ed., t. 859\*; and our *fig. 4*, in Pl. 47.

late, serrated. Bracteas taper-pointed. Calyx smooth. Style prominent. Seeds slightly bordered. (*Smith.*)

**SPECIFIC CHARACTER.**—Stem much branched. Leaves linear-lanceo-

**DESCRIPTION, &c.**—This species is found in corn-fields in the north of England, where it is so abundant, particularly in a peaty soil, as almost to destroy the crops. The flowers are very handsome, and they are produced in July.

THE COMMON YELLOW RATTLE. (R. CRISTA GALLI, *Lin.*)

This species is not so handsome as the other. The flowers are, however, of a bright yellow, and they are produced in June. The seeds, when ripe, rattle in the dry capsule, and hence the plant has taken its popular English name.

## GENUS III.

THE LOUSE-WORT. (PEDICULARIS, *Lin.*)*Lin. Syst. DIDYNAMIA ANGIOSPERMIA.*

**GENERIC CHARACTER.**—Calyx ventricose, generally five-cleft, or unequally two-three-lobed. Corolla tubular, two-lipped; the upper lip long, compressed, often emarginate; the lower flat, spreading, three-lobed. Stamens four, didynamous. Capsule compressed, acuminate, often oblique and longer than the calyx. (Dec.)

**DESCRIPTION, &c.**—There are only two species in this genus, both of which are very pretty plants. The name of *Pedicularis* signifies literally Louse-wort, from the plants being supposed to occasion the sheep that feed upon them to be infested with those noxious insects. The genus is placed in the same Linnaean class and order as the last.

1.—THE PASTURE LOUSE-WORT, OR DWARF RED RATTLE. (PEDICULARIS SYLVATICA, *Lin.*)

**ENGRAVINGS.**—Eng. Bot., t. 400; 2nd ed., t. 866; and our *fig. 5*, in Pl. 47.

**SPECIFIC CHARACTER.**—Stems several, spreading, simple. Calyx oblong, angular, in five unequal notched segments. (*Smith.*)

**DESCRIPTION, &c.**—This species is common on heathy pastures. It is a perennial, and flowers in June and July. There is a variety with white flowers.

THE MARSH LOUSE-WORT, OR TALL RED-RATTLE. (P. PALUSTRIS, *Lin.*)

This species is generally found in marshes, but it also occasionally grows in wet meadows where the soil is peaty. It is doubtful whether it is an annual or a perennial, but at any rate it produces its pretty rose-coloured flowers in June and July.

## GENUS IV.

THE BARTSIA. (BARTSIA, *Lin.*)

*Lin. Syst. DIDYNAMIA ANGIOSPERMIA.*

GENERIC CHARACTER.—Calyx not ventricose, four-elelf. Corolla tubular, two-lipped ; the upper lip galeate, erect, entire, the lower very small, reflexed, trifid. Stamens shorter than the galea ; anthers downy. Capsule ovate, acuminate, compressed. (Dec.)

DESCRIPTION, &c.—This is a small genus, containing only two or three British species. The name of *Bartsia* was given in honour of Bartsch, a Prussian botanist, the friend of Linnæus, who died at Surinam.

1.—THE ALPINE BARTSIA. (BARTSIA ALPINA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 361 ; 2nd ed., t. 855 ; and our *fig. 6*, in Pl. 47.

SPECIFIC CHARACTER.—Leaves opposite, ovate, somewhat heart-shaped, bluntly serrated. Stem square. Root creeping. (Smith.)

DESCRIPTION, &c.—This species is found occasionally in the mountainous districts of the north of England and Scotland, but only in moist situations. It is a dwarf perennial plant, and it flowers in June and July.

THE YELLOW VISCID BARTSIA. (B. VISCOSEA, *Lin.*)

This plant is only found on the west side of England and Scotland. It is an annual, and produces its small yellow flowers in August.

THE RED BARTSIA. (B. ODONTITES, *Lin.*)

This species is a very common weed in arable land, particularly where the soil is calcareous. It flowers much more abundantly than the other kinds, and continues to produce a succession of flowers from July to September.

## GENUS V.

THE EYE-BRIGHT. (EUPHRASIA, *Lin.*)

*Lin. Syst. DIDYNAMIA ANGIOSPERMIA.*

GENERIC CHARACTER.—Calyx four-elelf. Corolla tubular, two-lipped ; the upper lip galeate, emarginate, the lower three-lobed, equal. Anthers two, or four, acuminate at the base. Capsule ovate, compressed, obtuse, emarginate. (Dec.)

DESCRIPTION, &c.—This genus contains only one British species ; and it takes its name of *Euphrasia*, from a Greek word signifying joy and pleasure, in allusion to its supposed medical properties in curing diseases and raising the spirits when depressed.

1.—THE COMMON EYE-BRIGHT. (EUPHRASIA OFFICINALIS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1416 ; 2nd ed., t. 858 ; and our *fig. 7*, in Pl. 47.

SPECIFIC CHARACTER.—Leaves ovate, furrowed, sharply-toothed. (Smith.)

DESCRIPTION, &c.—This is a dwarf plant, the stem seldom exceeding six inches in height, and sometimes

being much lower. It was formerly highly esteemed for its medicinal properties, but it is now comparatively neglected, though it is still used in country places, when steeped in milk, as a remedy for weak eyes. It is an annual, and it produces its flowers from July to September.

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### GENUS VI.

#### THE TOAD-FLAX. (LINARIA, Desf.)

*Lin. Syst. DIDYNAMIA ANGIOSPERMIA.*

GENERIC CHARACTER.—Calyx five-parted; the two lower segments | lower three-lobed. Capsule ovate or globose, opening with several far apart from the rest. Corolla ringent, calcarate at the base; the | valves at the apex. Seeds bordered. (Dec.)  
tube inflated; the limb two-lipped; the upper lip bifid, reflexed; the

DESCRIPTION, &c.—The species belonging to this genus are often confounded with those of *Antirrhinum*, but they are distinguished by a spur-like process at the base of the corolla. The name of *Linaria* is derived from *Linum*, flax, which the leaves of some of the species resemble. The genus is placed in the same Linnæan class and order as *Rhinanthus*.

\* Leaves dilated. Stems flaccid.

#### 1.—THE IVY-LEAVED TOAD-FLAX. (LINARIA CYMBALARIA, Mill.)

SYNONYMES.—*Antirrhinum Cymbalaria*, *Lin.*; Wandering Sailor.

SPECIFIC CHARACTER.—Leaves heart-shaped, five-lobed, alternate,

ENGRAVINGS.—Eng. Bot., t. 502; 2nd ed., t. 867; and our *fig. 1*, | smooth. Stems procumbent. (Smith.)  
in Pl. 48.

DESCRIPTION, &c.—This beautiful little trailing plant, which is now so common everywhere, particularly on old walls in London and other cities, is not a true native of this country, having been originally introduced from Italy. It is not possible, however, for any plant to have become more completely naturalised; and wherever it is introduced it is equally sure to establish itself. It is a perennial, and it produces its pretty blue flowers during the whole of the summer and autumn.

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#### 2.—THE ROUND-LEAVED FLUELLEN. (LINARIA SPURIA, Mill.)

SYNONYME.—*Antirrhinum spurium*, *Lin.* ENGRAVINGS.—Eng. Bot., t. 691; 2nd ed., t. 868; and our *fig. 2*, in Pl. 48.

SPECIFIC CHARACTER.—Leaves ovate, downy, chiefly alternate. Stems procumbent, hairy. (Smith.)

DESCRIPTION, &c.—This species is frequent in dry arable land on the whole of the eastern part of England, but particularly towards the south. It is an annual, and flowers from July to September.

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#### THE SHARP-POINTED FLUELLEN. (LINARIA ELATINE, Desf.)

This is a species bearing considerable resemblance to the last, but distinguished by its angular sharp-pointed leaves. It is an annual, with small inconspicuous flowers, which appear from June till September.

\*\* Leaves narrower. Stems upright.

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#### 3.—THE CREEPING PALE-BLUE TOAD-FLAX. (LINARIA REPENS, H. Kew.)

SYNONYMES.—*Antirrhinum repens*, *Lin.*; *A. monspessulanum*, *Lin.*

SPECIFIC CHARACTER.—Leaves linear, glaucous, scattered; partly

ENGRAVINGS.—Eng. Bot., t. 1253; 2nd ed., t. 870; and our *fig. 3*, in Pl. 48. whorled. Stem panicled. Calyx smooth, the length of the spur. (Smith.)

DESCRIPTION, &c.—This species is only found in the south of England and Ireland, and it generally grows

only in chalky soils. It is rather a pretty plant, from the bright colours of its flowers. It is a perennial, and it flowers from July to September.

4.—THE YELLOW TOAD-FLAX. (*LINARIA VULGARIS*, *Moench.*)

SYNONYME.—*Antirrhinum Linaria*, *Lin.*

ENGRAVINGS.—Eng. Bot., 658; 2nd ed., t. 871; and our *fig. 4*, in Pl. 48.

SPECIFIC CHARACTER.—Leaves linear-lanceolate, crowded. Stem erect. Spikes terminal. Flowers imbricated. Calyx smooth, shorter than the spur. (*Smith.*)

DESCRIPTION, &c.—This beautiful plant would be very greatly admired if it were not so common. The bright yellow of the greater part of the flower, with its orange mouth, have given rise to the popular English name of Butter and Eggs. There is a variety, sometimes called *Linaria PELLORIA*, the flowers of which are very curiously deformed. Both the species and the variety are perennials, and they flower in June and July.

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THE LEAST TOAD-FLAX. (*L. MINOR*, *Desf.*)

This is an inconspicuous little plant, found in the east and south-east of England in sandy fields. It is an annual, and its flowers, which have no beauty, are produced in June and July.

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GENUS VII.

THE SNAPDRAGON. (*ANTIRRHINUM*, *Lin.*)

*Lin. Syst. DIDYNAMIA ANGIOSPERMIA.*

GENERIC CHARACTER.—Calyx five-parted. Corolla without a spur, gibbous at the base; the tube inflated; the limb two-lipped; the upper lip bifid and reflexed; the lower three-lobed, with a projecting palate. Capsule oblique at the base, dehiscing by three small holes at the apex. (*Dec.*)

DESCRIPTION, &c.—This genus, which was a very extensive one under Linnæus, is now confined to very narrow limits, and there are only two species of it which are natives of Britain. The name of *Antirrhinum* signifies literally, resembling a nose. The genus is in the same Linnæan class and order as the last.

1.—THE GREAT SNAPDRAGON. (*ANTIRRHINUM MAJUS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 129; 2nd edit., t. 874; and our *fig. 5*, in Pl. 48.

SPECIFIC CHARACTER.—Flowers in a dense cluster. Leaves lanceolate. Segments of the calyx ovate, obtuse. (*Lindley.*)

DESCRIPTION, &c.—This splendid plant is now abundant on old walls and rocks, particularly in the chalky districts, though it is said not to be a true native of this country. The flowers vary very much in colour, though they have all the same peculiarity of shape, and, in all, the corolla, when pressed on the sides, gapes like the mouth of an animal, returning to its original position as soon as the pressure is removed. It is said that the humble-bees avail themselves of this peculiarity, and enter the flower, the lip closing over them while they are taking the honey, and opening again for them, by their pressure, when they wish to come out. The plant is a perennial, and it flowers from July to September.

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THE LESSER SNAPDRAGON, OR CALF'S SNOUT. (*A. ORONTIUM*, *Lin.*)

This is an annual plant, of no beauty, but with a very curious seed-vessel, which bears a fanciful resemblance to the face of an animal at the base. The flowers are small, and they appear in July and August.



1. Ivy-leaved Toad-Flax 2 Round-leaved Flueken 3 Creeping pale blue
Toad-Flax 4. Yellow Toad-Flax. 5. Great Snapdragon. —



GENUS VIII.

THE MUDWORT. (LIMOSELLA, *Lin.*)*Lin. Syst.* DIDYNAMIA ANGIOSPERMIA.

DESCRIPTION, &c.—The only British species belonging to this genus is a little annual plant, which grows only in very muddy places, and sends out numerous prostrate runners that take root and produce new plants. The flowers are pink, but they are so small as to be almost imperceptible. The name of *Limosella* is derived from *limus*, mud.

GENUS IX.

THE FOXGLOVE. (DIGITALIS, *Lin.*)*Lin. Syst.* DIDYNAMIA ANGIOSPERMIA.

GENERIC CHARACTER.—Calyx five-parted, unequal. Corolla campanulate; the limb unequal, obliquely four-lobed. Stigma simple or bilabiate. Capsule ovate, acuminate. (Dec.)

DESCRIPTION, &c.—There is only one species of this beautiful genus which is a native of Britain, viz. the common Foxglove (*D. purpurea*, *Lin.*). This species is a biennial, flowering in June and July, and it is common in pastures and on hedge-banks in every part of Great Britain. The name of *Digitalis* signifies the finger of a glove, which the flowers greatly resemble.

GENUS X.

THE SIBTHORPIA. (SIBTHORPIA, *Lin.*)*Lin. Syst.* DIDYNAMIA ANGIOSPERMIA.

GENERIC CHARACTER.—Calyx five-parted. Corolla somewhat rotate; the tube short; the limb regular, five-lobed. Stamens four, didynamous. Stigma capitate. Capsule orbicular, compressed, dehiscing at the apex. (Dec.)

DESCRIPTION, &c.—There is only one species of this genus, viz. the Creeping Sibthorpia, or Cornish Moneywort (*S. europea*). This plant is only found in moist shady places in the south-west of England and south of Ireland. The flowers are inconspicuous, but the leaves are very pretty, being nearly round, beautifully scalloped, and of a most delicate green. The plant is a perennial, and it flowers from June till October. The name of *Sibthorpia* was given in honour of Dr. Sibthorp, Professor of Botany at Oxford.

GENUS XI.

THE FIGWORT. (SCROPHULARIA, *Lin.*)*Lin. Syst.* DIDYNAMIA ANGIOSPERMIA.

GENERIC CHARACTER.—Calyx five-lobed. Corolla globose; the limb contracted, two-lipped; the upper lip two-lobed, with an occasional intermediate scale; the lower shorter, and three-lobed. Stigma simple. Capsule roundish, acuminate; valves entire, turned inwards at the base. (Dec.)

DESCRIPTION, &c.—There are four species of this genus, viz. the common Figwort (*S. nodosa*), the root of which is fleshy, and was eaten at the siege of Rochelle; the Water Betony (*S. aquatica*), a common weed in

ditches, with a thick angular stem ; the Balm-leaved Figwort (*S. Scorodonia*), an insignificant weed ; and the Yellow Figwort (*S. vernalis*). The first three of these are perennials, and flower in July ; but *S. vernalis* is ornamental, and bears a considerable resemblance to a small-flowered Calceolaria. It is a biennial, and flowers in April and May. The name of *Scrophularia* is derived from *scrophula*, because *S. nodosa* was formerly supposed to be efficacious in the cure of that disease. The name of Figwort alludes to the knotted roots of the same plant, which look something like a heap of small figs.

CHAPTER LXIV.

THE BROOM-RAPE FAMILY. (OROBANCHEÆ, Rich.)

CHARACTER OF THE ORDER.—Calyx divided, persistent, inferior. Corolla monopetalous, hypogynous, irregular, persistent, with an imbricated aestivation. Stamens four, didynamous. Ovarium superior, one-celled, seated in a fleshy disk, with two or four parietal polyspermous

placentæ ; style one ; stigma two-lobed. Fruit capsular, inclosed within the withered corolla, one-celled, two-valved, each valve bearing one or two placenta in the middle. Seeds indefinite, very minute ; embryo minute, at one end of a fleshy albumen.—Herbaceous leafless plants, growing parasitically upon the roots of other species. Stems covered with brown or colourless scales. (*Lindley.*)

DESCRIPTION, &c.—The plants belonging to this order have the peculiarity of not growing in the ground, but on the roots of other plants. They are also without leaves, their stems being covered with scales ; and the flowers, though generally very ornamental, have a remarkable appearance, from the long, apparently withered, bracts with which they are generally enveloped.

GENUS I.

THE BROOM-RAPE. (OROBANCHE, Lin.)

Lin. Syst. DIDYNAMIA ANGIOSPERMIA.

GENERIC CHARACTER.—Calyx one or two-parted, with from one to three bractæ. Corolla tubular, rigid, four or five-cleft. Stamens four, didynamous. Ovarium surrounded by a disk at the base. Style one. Stigma capitate, emarginate, two-lobed. (*Dec.*)

DESCRIPTION, &c.—This is a genus of very ornamental plants, but very hurtful ones, as they destroy other plants, and generally useful ones, without being of the slightest service themselves. The generic name of *Orobanche* is derived from two Greek words, signifying to strangle a vetch, in allusion to the mischief done by these parasites to leguminous plants, which they very frequently attack. The species are not absolutely either perennial or annual, as they change their habits in this respect according to those of the plants on which they feed. They are extremely astringent, and that appears the only property they possess.

* *Bractæas solitary.*

1.—THE COMMON BROOM-RAPE. (OROBANCHE MAJOR, Lin.)

ENGRAVINGS.—Eng. Bot., t. 421 ; 2nd ed., t. 885.

SPECIFIC CHARACTER.—Stem simple. Corolla inflated ; upper lip

slightly notched ; lower with acute, nearly equal segments. Stamens

quite smooth below. Style downy. (*Smith.*)

DESCRIPTION, &c.—This is the most common of all the British kinds of *Orobanche*, and it is generally found on the roots of furze or broom, whence the plant takes its English name. The flowers are of a dingy brown or purple, and appear in June and July. The stem is succulent, and it grows from a foot to eighteen inches high.

THE CLOVE-SCENTED BROOM-RAPE. (O. CARYOPHYLLACEA, *Smith.*)

This is a more ornamental plant than the common species, as its flowers, which appear in August, are of a pale purple, with very distinct dark veins. It has only been found in Kent, Sussex, and Devonshire, and it was first discovered growing on the roots of the Larger Bed-straw.

THE TALL BROOM-RAPE. (O. ELATIOR, *Sutton.*)

This species is generally found on *Centaurea Scabiosa*. The flowers are of a pale pink, and the stem, which is very thick, is of a brownish yellow. The flowers appear in July and August.

THE LESSER BROOM-RAPE. (O. MINOR, *Smith.*)

This is a very elegant plant, though it is a very destructive one, as it generally attacks the roots of the common red Clover, and will sometimes destroy nearly a whole field. Both the flowers and stem are of a lavender colour.

THE RED FRAGRANT BROOM-RAPE. (O. RUBRA, *Smith.*)

This species is a dark brownish red, and the flowers, which have a fragrance like that of the Honeysuckle, appear in July. It is generally found on the roots of the Wild Thyme.

** Bracteas three to each flower.

2.—THE BLUE BROOM-RAPE. (OROBANCHE CÆRULEA, *Villars.*)

SYNONYME.—O. *purpurea*, *Jacq.*

ENGRAVINGS.—Eng. Bot., t. 423; 2nd ed., t. 889; and our *fig. 1*,

SPECIFIC CHARACTER.—Stem simple. Bracteas 3. Upper lip of the corolla cloven and notched; lower, in three equal entire segments. Style downy. (*Smith.*)

DESCRIPTION, &c.—This is a rare species, which is seldom found except in Norfolk. It generally attaches itself to the roots of the common Wormwood, or to the Sea Southernwood. It flowers in July.

THE BRANCHED BROOM-RAPE. (O. RAMOSA, *Lin.*)

This is the most curious plant of the genus, as it is the only one which has a branched stem. It is generally found attached to the roots of hemp in moist rich soil, and it is most common in Norfolk and Suffolk. The stem is yellowish, with a conspicuous brown bulb at the base. The flowers are of a pale purple, or yellowish, and they appear in August and September.

GENUS II.

THE TOOTH-WORT. (LATHRÆA, *Lin.*)

Lin. Syst. DIDYNAMIA ANGIOSPERMIA.

GENERIC CHARACTER.—Calyx campanulate, four-cleft. Corolla tubular, two-lipped; the upper lip galeate. Stamens four, didynamous. Ovarium surrounded by a disk at the base. Style one. Stigma two-lobed. (*Lindley.*)

DESCRIPTION, &c.—This genus contains only one British plant. The name of *Lathraea* is derived from a Greek word signifying hid or concealed, because the plant is generally found almost buried in decayed leaves.

1.—THE GREATER TOOTH-WORT. (*LATHRÆA SQUAMARIA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 50; 2nd ed., t. 864; and our *fig. 2*, in Pl. 49. | SPECIFIC CHARACTER.—Flowering branches erect, simple. Flowers axillary, unilateral, pendulous; lower lip in three lobes; upper cloven. (*Smith.*)

DESCRIPTION, &c.—It is the peculiarity of the genus *Lathraea*, that it is only found on the roots of trees, generally on those of the hazel, the elm, or the walnut. The stem is succulent, and it is closely covered at the base with fleshy tooth-like scales. The flowers are purple, and they appear in April or May.

CHAPTER LXV.

THE COW-WHEAT FAMILY. (*MELAMPYRACEÆ, Rich.*)

CHARACTER OF THE ORDER.—Calyx divided, persistent, unequal, inferior. Corolla monopetalous, hypogynous, deciduous, personate. Stamens four, didynamous; anthers with acuminate lobes. Ovarium superior, two-celled, two-seeded; style one; stigma obtuse. Fruit capsular, two-celled, two-valved, covered by the calyx. Seeds in pairs, erect; embryo minute, inverted in the apex of fleshy albumen; radicle superior.—Herbaceous plants. Leaves opposite, without stipule. Flowers axillary, with coloured floral leaves. (*Lindley.*)

DESCRIPTION, &c.—This order contains only one genus of British plants.

GENUS I.THE COW-WHEAT. (*MELAMPYRUM, Lin.*)

Lin. Syst. DIDYNAMIA ANGIOSPERMIA.

GENERIC CHARACTER.—Calyx tubular, four-cleft. Corolla tubular, two-lipped, compressed; the upper lip galeate, folded back at the margin, the lower sulcate, trifid. Stamens four, didynamous. Capsule oblong, obliquely acuminate, compressed; cells monospermous. Seeds large, somewhat ovate. (*Lindley.*)

DESCRIPTION, &c.—This genus is remarkable for its seeds, which resemble grains of wheat, and for the coloured and deeply cut bractæ of most of the species. All the plants belonging to the genus are ornamental, and they are all annuals. The name of *Melampyrum* signifies literally black wheat, because, according to some, the plants turn black in drying, and according to others, because if a few grains of the *Melampyrum* become mixed with the wheat, they turn the flour black. Cows are very fond of the herbage of this plant.

1.—THE CRESTED COW-WHEAT. (*MELAMPYRUM CRISTATUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 41; 2nd ed., t. 860; and our *fig. 3*, in Pl. 49. | SPECIFIC CHARACTER.—Spikes quadrangular. Bractæ heart-shaped, closely imbricated, finely toothed. (*Smith.*)

DESCRIPTION, &c.—This very curious plant is a native not only of woods and thickets, but of corn fields in the eastern and midland counties of England. The stem grows about a foot high, and is often much branched. The flowers, which are yellow, are produced in July.

2. THE PURPLE COW-WHEAT. (*MELAMPYRUM ARVENSE, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 53; 2nd ed., t. 861; and our *fig. 4*, in Pl. 49. | SPECIFIC CHARACTER.—Spikes conical. Bractæ lax, lanceolate, pinnatifid. Calyx-teeth longer than the tube. Corolla closed. (*Smith.*)

DESCRIPTION, &c.—This is an annual plant, very common in corn fields, where it grows to the height of eighteen inches or two feet. It flowers in July; but its flowers are not particularly ornamental, as its beauty consists in its bractæ, which have mingled shades of yellow, rose-colour, purple, and green.



1 Blue Broomrape 2 Tooth Wort 3 Crested Cow-wheat 4 Purple
- Cow-wheat. 5. The Lervain.

THE YELLOW COW-WHEAT. (*M. PRATENSE, Lin.*)

This species is only found in woods and thickets, notwithstanding its specific name, which signifies meadow. It is much less ornamental than the other kinds, as its bractæ are small and not conspicuous. Its flowers are of a pale yellow, and they are produced from June till August.

THE SMALL-FLOWERED COW-WHEAT. (*M. SYLVATICUM, Lin.*)

This species is very rare, and many botanists suppose it to be only a variety of the last. It is only found in alpine woods in the north of England and in Scotland.

CHAPTER LXVI.

THE VERVAIN FAMILY. (VERBENACEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Calyx tubular, persistent, inferior. Corolla hypogynous, monopetalous, tubular, deciduous, generally with an irregular limb. Stamens usually four, didynamous, seldom equal, occasionally two. Ovarium two- or four-celled; ovules erect, solitary or twin; style one; stigma bifid or undivided. Fruit drupaceous, or baccate. Seeds erect; albumen none, or in very small quantity; embryo erect.—Trees or shrubs, sometimes herbaceous plants. Leaves generally opposite, simple or compound, without stipule. Flowers in opposite corymbs, or spiked alternately; sometimes in dense heads; very seldom axillary and solitary. (*R. Br.*)

DESCRIPTION, &c.—There is only one British genus in this order.

GENUS I.

THE VERVAIN. (*VERBENA, Lin.*)

Lin. Syst. DIDYNAMIA ANGIOSPERMIA.

GENERIC CHARACTER.—Calyx five-cleft. Corolla with a somewhat two-lipped, five-lobed, unequal limb. Stamens four, didynamous. Seeds inclosed in a vascular tissue. (*Dec.*)

DESCRIPTION, &c.—There is only one British species in this genus. The name of Verbena is derived from two Celtic words, signifying to drive away the stone, from the plant being formerly supposed to be efficacious in curing that disorder. The genus is generally placed in the Linnæan class and order Didynamia Angiospermia from there being four stamens of unequal length, and the seeds being not inclosed in a capsule; but some botanists place the genus in the Linnæan class and order Diandria Monogynia, because there are sometimes only two stamens, and there is never more than one style.

1.—THE COMMON VERVAIN. (*VERBENA OFFICINALIS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 767; 2nd ed., t. 883; and our *fig. 5*, in Pl. 49.

SPECIFIC CHARACTER.—Stamens four. Spikes slender, pointed. Leaves deeply cut. Stem mostly solitary. (*Smith.*)

DESCRIPTION, &c.—A very common plant growing by the roadside in waste places in almost every part of England, but rare in Ireland and Scotland. The flowers are small, and so totally devoid of beauty, as to render it difficult to suppose they can belong to the same genus as the splendid Verbenas of our gardens. The British Vervain was, however, formerly highly valued both for its power against witches and its efficacy in medicine; and the root of it, suspended by a ribbon round the neck, was said to be a cure in all scrofulous diseases. The plant is a perennial, and its flowers appear in July.

CHAPTER LXVII.

THE LABIATE FAMILY. (LABIATÆ, *Juss.*)

CHARACTER OF THE ORDER.—Calyx tubular, five or ten-toothed, inferior, persistent; the odd tooth being next the axis; regular or irregular. Corolla monopetalous, hypogynous, bilabiate; the upper lip undivided or bifid, overlapping the lower, which is larger and three-lobed. Stamens four, didynamous, inserted upon the corolla, alternately with the lobes of the lower lip; the two upper sometimes wanting; anthers two-lobed, the lobes sometimes so far apart at the base, that the two cells are confluent at the apex; sometimes one cell altogether obsolete. Ovarium deeply four-lobed, inserted in a fleshy

hypogynous disk; the lobes each containing one erect ovulum; style one; stigma bifid, usually acute. Fruit four small nuts inclosed within the persistent calyx. Seeds erect, with little or no albumen; embryo erect; cotyledons flat. Herbaceous plants or under shrubs. Stem four-cornered, with opposite ramifications. Leaves opposite, divided or undivided, without stipulæ, replete with receptacles of aromatic oil. Flowers in opposite, nearly sessile cymes, resembling whorls; sometimes as if capitate. (*Lindley.*)

DESCRIPTION, &c.—The labiate plants are very easily known from the singular form of their flowers, which consist of two distinct parts or lips, one of which generally falls down, and is divided into three lobes; while the other is entire and stands erect. Many of the plants belonging to this order are well known for their aromatic qualities, such as thyme, sage, mint, and balm; for which, indeed, they are more remarkable than for the beauty of their flowers. They have also generally square stems, and the flowers, which are small, are disposed in small clusters opposite each other, so as to appear whorled. None of the species are injurious, and some of them are powerful tonics.

GENUS I.

THE SAGE. (*SALVIA, Lin.*)

Lin. Syst. DIANDRIA MONOGYNIA.

GENERIC CHARACTER.—Calyx somewhat campanulate, two-lipped; the upper lip entire or three-toothed, the lower bifid; the orifice of the calyx narrow, the upper lip entire. Corolla ringent; the upper lip fornicate and emarginate. Stamens two. Anthers consisting of a long linear connective, with a fertile cell at the upper extremity, and usually connected together at the lower extremity. (*Lindley.*)

DESCRIPTION, &c.—It is rather singular that though the common Sage of the kitchen is a *Salvia*, and though the botanic word *Salvia* is always translated Sage, yet that the plant called the Wild Sage is not a *Salvia*, but a *Teucrium*, and that the only two British species of *Salvia* bear the English name of Clary. The name of *Salvia* is derived from the Latin word *Salvus*, that is, safe, in allusion to the supposed medical virtues of the common Garden Sage; and that these were formerly highly estimated, is also proved by the proverb, which says, “Why should a man die who has sage in his garden?” The genus is placed in the Linnæan class and order Diandria Monogynia, from its two stamens, and its single style.

1.—THE MEADOW CLARY. (*SALVIA PRATENSIS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 153; 2nd ed., t. 31; and our *fig. 1*, in Pl. 50. base; uppermost clasping the stem. Bractæs very small. Summit of the corolla glutinous. (*Smith.*)

SPECIFIC CHARACTER.—Leaves oblong, crenate, heart-shaped at the

DESCRIPTION, &c.—This is a very handsome perennial, with large dark purple flowers, which are produced in July. It is found in Kent and Surrey, but it is rare in both counties. It grows about three feet high, and is very ornamental, but not very aromatic.



1. Meadow Clary. 2 Bergamot 3 Wild Thyme 4 Bugle
5 Motherwort.

2.—WILD ENGLISH CLARY. (*SALVIA VERBENACA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 154; 2nd ed., t. 32.

SPECIFIC CHARACTER.—Leaves serrated, sinuated, smoothish. Corolla much more contracted than the calyx. (*Smith.*)

DESCRIPTION, &c.—This flower is in general common on chalky and gravelly soils. Its seeds produce a great quantity of tasteless mucilage when moistened: and if put under the eyelid, the tears soften the mucilage, which then envelopes any sand or dust that may be in the way, and brings it out safely: whence the plant is named Clary, or clear-eye.

GENUS II.

THE BUGLE. (*AJUGA, Lin.*)*Lin. Syst. DIDYNAMIA GYMNOSPERMIA.*

GENERIC CHARACTER.—Calyx five-cleft, nearly equal. Corolla tubular, labiate; the upper lip very small, with two teeth; the lower two-lobed, with a large intermediate obcordate lobe. Nuts reticulated. (*Dec.*)

DESCRIPTION, &c.—Some of the species belonging to this genus are perennials, and others annuals; the flowers are ornamental, but the plants are not used either in medicine or the arts. The name of Ajuga signifies without a yoke, and it is said to allude to the shape of the calyx; another derivation is from Abigo, to drive away. The genus is placed in the Linnæan class Didynamia, from its having four stamens, two of which are longer than the others; and in the order Gymnospermia, from the seeds not being inclosed in a capsule.

1.—THE COMMON BUGLE. (*AJUGA REPTANS, Lin.*)ENGRAVINGS.—Eng. Bot., t. 489; 2nd ed., t. 821; and our *fig. 4*, in Pl. 50.SPECIFIC CHARACTER.—Almost smooth, with a solitary stem, and creeping runners. Lower lip of the corolla four-cleft. (*Lindley.*)

DESCRIPTION, &c.—This pretty little plant is common in woods and marshes, flowering in May. Its blue flowers grow on a stem of about a foot high, that throws out from the base many creeping scions, which easily strike root. This, indeed, is the chief manner of propagating it, as its seeds seldom entirely ripen. The herb is astringent, and it was formerly used as a vulnerary.

THE PYRAMIDAL BUGLE. (*A. PYRAMIDALIS, Lin.*)

An Alpine plant, found in several parts of Scotland, but regarded as rare. The species is a perennial, and it produces its purplish flowers in June.

THE ALPINE BUGLE. (*A. ALPINA, Lin.*)

This species is found on the mountains of England, Scotland, and Wales; but it is rare. It is a perennial, and it produces its pale blue, or flesh-coloured flowers in June and July.

THE GROUND PINE, OR YELLOW BUGLE. (*A. CHAM-EPIITYS, Smith.*)

This plant is so very different from the other species of the genus, that Linnæus placed it in the genus Teucrium. It is an annual with a singular habit of growth, and small yellow flowers, which grow singly and not in whorls like those of the other species. It is found in sandy or gravelly fields, and its flowers appear in April or May.

GENUS III.

THE GERMANDER. (TEUCRIUM, *Lin.*)

GENERIC CHARACTER.—Calyx tubular, seldom campanulate, five-eleven. Corolla with a short tube, labiate; the upper lip two-parted; the segments reflexed at the sides; the lower three-lobed, the intermediate lobe largest. Stamens protruded between the fissure of the upper lip. (Dec.)

DESCRIPTION, &c.—The plants belonging to this genus were formerly much valued for their medicinal qualities, being intensely bitter. In modern times, however, it has been discovered that they are of little value, most of them being only slightly tonic. The genus is named *Teucrium*, from Teucer, Prince of Troy, who is said to have been the first to employ the plant medicinally; and it is placed in the same Linnæan class and order as *Ajuga*.

1.—THE WOOD SAGE. (TEUCRIUM SCORODONIA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1543; 2nd ed., t. 818.

SPECIFIC CHARACTER.—Leaves heart-shaped, hairy, serrated, stalked. Clusters aggregate, unilateral. Stem erect. (Smith.)

DESCRIPTION, &c.—This plant has rather pretty flowers, and sage-like leaves. The flowers are of a yellowish-white, or cream-colour, with very conspicuous bright red stamens. This species is found abundantly in woods and on bushy heaths in every part of great Britain, and it is very generally called the Wild or Wood Sage. The plant, when dried, has an aromatic scent, and as it is intensely bitter, it is sometimes used as a substitute for hops; but it gives a very dark colour to the beer. It is a perennial, and it flowers from June till August.

2.—THE WATER GERMANDER. (TEUCRIUM SCORDIUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 828; 2nd ed., t. 819.

SPECIFIC CHARACTER.—Leaves oblong, sessile, downy, with tooth-like serratures. Flowers axillary, stalked in pairs. Stem procumbent. (Smith.)

DESCRIPTION, &c.—This species is only found in wet meadows in Cambridgeshire, and in Oxfordshire, and even in these places it is somewhat rare. The flowers are rose-colour and very pretty; the taste is excessively bitter, and the scent somewhat like that of garlic. The plant is a perennial, and the flowers appear from June till August.

THE WALL GERMANDER. (T. CHAMÆDRYS, *Lin.*)

This species was formerly cultivated for medicinal purposes, but it is now neglected, and it is only found occasionally in a wild state on old walls and ruins in various parts of Great Britain. The plant is a perennial, with numerous suckers, and the stems are decumbent. The flowers are larger than those of the preceding species, and of a paler rose colour, and they continue appearing from June till the end of autumn.

GENUS IV.

THE WATER HOREHOUND, OR GIPSYWORT. (LYCOPUS, *Lin.*)

Lin. Syst. DIANDRIA DIGYNIA.

GENERIC CHARACTER.—Corolla a little larger than the calyx, four-lobed, nearly equal. Stamens two. (Lindley).

DESCRIPTION, &c.—There is only one species in this genus (*L. europaeus*). It has handsome leaves somewhat like those of a sweet Chestnut, and very small white flowers produced in whorls. It is found on the

banks of ponds, and other pieces of water where the soil is gravelly, and the water clear, and it flowers in July and August. It yields a black dye, and it is said to be used by those who wish to pass for gipsies, to darken their skin.

GENUS V.

THE MINT. (*MENTHA, Lin.*)

Lin. Syst. DIDYNAMIA GYMNOSPERMIA.

GENERIC CHARACTER.—Corolla little longer than the calyx, four-lobed, nearly equal; the upper lobe broadest, and nearly emarginate. Stamens four, distant. (*Dec.*)

DESCRIPTION, &c.—This is a very extensive genus, containing many well-known plants, but very few have ornamental flowers, though all have an aromatic scent. *Mentha* is supposed to have been the Greek name of one of the species.

1.—THE SPEAR MINT. (*MENTHA VIRIDIS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 2424; 2nd ed., t. 804.

SPECIFIC CHARACTER.—Spikes interrupted. Leaves sessile, lanceo-

late, acute, naked. Bracteas bristle-shaped, somewhat hairy, as well as the teeth of the calyx. Flower-stalks very smooth. (*Smith.*)

DESCRIPTION, &c.—This is the common Mint of the gardens; and it produces its whorls of small pinkish flowers in August and September. The leaves, as is well known, have a pungent and aromatic flavour. It is a perennial.

2.—THE BERGAMOT MINT. (*MENTHA CITRATA, Ehr.*)

ENGRAVINGS.—Eng. Bot., t. 1025; 2nd ed., t. 806; and our *fig. 2*, in Pl. 50.

SPECIFIC CHARACTER.—Spikes capitate, very blunt. Leaves stalked, heart-shaped, naked on both sides. Calyx and flowers perfectly smooth. (*Smith.*)

DESCRIPTION, &c.—This species has a very fragrant scent, so like that of the Bergamot (*Monarda didyma*), that it is cultivated for its perfume. The flowers, which are pink, appear in August and September. The leaves are tinged with red, and the whole plant becomes purple when long exposed to the sun.

THE HORSE MINT. (*M. SYLVESTRIS, Smith.*)

This is the most common of all the species, and it has numerous varieties. The whole plant has a shaggy appearance, from being covered with long white hairs. The flowers are small, and of a dingy pink; they appear in August and September. The plant is a perennial, and it grows in moist ground in shady places.

THE ROUND-LEAVED MINT. (*M. ROTUNDIFOLIA, Lin.*)

This species is found in moist ground, growing among rubbish. The flowers, which appear in August and September, are of a very pale pink.

THE NARROW-LEAVED RED MINT. (*M. PRATENSIS, Sole.*)

The leaves are very handsome, but the flowers, which appear in September, are small, and of a pale lilac. The scent is not so strong as that of most of the other species.

THE PEPPER MINT. (*M. PIPERITA, Smith.*)

There are several varieties of this well known plant, which is cultivated extensively for the sake of its

essential oil, which is used in medicine. The flowers are pale purple, and they appear in August and September. There are several varieties, but the most ornamental is *M. crispa*.

THE WATER MINT. (*M. AQUATICA, Lin.*)

This plant varies so much in different situations, that specimens of it have been supposed to be numerous different species. The flowers vary from pink to purple, but they always appear in August and September. The plant is a perennial, and it grows in watery places.

THE CORN MINT. (*M. ARVENSIS, Lin.*)

This species has a very disagreeable smell, like that of decayed cheese. The flowers are handsome, and of a dark rose colour, while the leaves are of a bright green. The plant is common in corn fields, where it flowers from July to September. There are two varieties of this species, which are generally called *M. acutifolia* and *M. rubra*, which are very ornamental.

PENNY ROYAL. (*M. PULEGIUM, Lin.*)

This plant, which is frequently used in domestic medicine, is not ornamental. It is a perennial, and it produces its small purple flowers in August and September.

GENUS VI.

THE THYME. (*THYMUS, Lin.*)

Lin. Syst. DIDYNAMIA GYMNOSPERMIA.

GENERIC CHARACTER.—Calyx campanulate; the orifice closed with hairs; the limb two-lipped; the upper lip three-toothed; the lower | the lower three-lobed; all the lobes nearly equal. Stamens four, distant. (*Lindley.*)

DESCRIPTION, &c.—There is only one species in this genus. The name of *Thymus* is from a Greek word, signifying strength, from the smell being considered strengthening and reviving.

1.—THE WILD THYME. (*THYMUS SERPYLLUM, Lin.*)

ENGRAVINGS.—Eng. Bot. t. 1514; 2nd. ed., t. 816; and our *fig. 3*, in Pl. 50.

SPECIFIC CHARACTER.—Flowers in small heads. Stems recumbent. Leaves flat, ovate, obtuse, entire, fringed at their base. (*Smith.*)

DESCRIPTION, &c.—It seems almost superfluous to attempt to describe Wild Thyme; as, who is there that has not breathed its refreshing fragrance when wandering over grassy hills, where it is crushed beneath the feet at every step? The flowers, which are of a dark reddish purple, continue appearing all the summer; and the plant spreads so abundantly in dry, chalky, and gravelly soils, as to form a kind of elastic turf over heaths and mountains. The stems are woody, and the plant is generally called a trailing shrub.

GENUS VII.

THE MARJORAM. (*ORIGANUM, Lin.*)

Lin. Syst. DIDYNAMIA GYMNOSPERMIA.

GENERIC CHARACTER.—Calyx cylindrical, five-toothed, when in fruit closed up with hairs. Corolla short; the upper lip erect, emarginate; the lower trifid, and all the lobes nearly equal. Stamens four, distant. (*Lindl.*)

DESCRIPTION, &c.—There is only one British species of this genus, namely the common Marjoram, (*O. vul-*

gare). It is a perennial plant, growing in dry bushy places, on chalk or lime stone, and producing its pinkish flowers in July and August. The whole plant is powerfully aromatic. The name of *Origanum*, is derived from two Greek words, signifying the joy of the mountain, and *Marjoram* is said to be a corruption of *Origanum*.

GENUS VIII.

THE BALM. (MELISSA, *Lin.*)

Lin. Syst. DIDYNAMIA GYMNOSPERMIA.

GENERIC CHARACTER.—Calyx cylindrical or gibbous at the base, the orifice closed with hairs, or nearly naked, the limb two-lipped, the upper lip three-toothed; the lower bifid, or with two bristles. Corolla with a two-lipped limb; the upper lip emarginate, the lower three-lobed. Stamens four, the upper ones shorter than the lower. Anthers in pairs under the upper lip of the corolla. (*Lindley.*)

DESCRIPTION, &c.—The common Balm is not a native of Britain, but there are several well known British plants in this genus; one of which is the Basil thyme, (*M. Acinos*, Benth.), an annual plant, with an agreeable fragrance, and pale purple flowers, which appear in August; another is the Calamint (*M. Calamintha*, Lin.); and another the Wild Basil (*M. Clinopodium*, Benth.). All these plants have several synomymes, having been placed by botanists in different genera. The name of *Melissa*, is from the Greek word for a bee, because bees are very fond of the plants belonging to this genus.

GENUS IX.

THE CATMINT. (NEPETA, *Lin.*)

Lin. Syst. DIDYNAMIA GYMNOSPERMIA.

GENERIC CHARACTER.—Calyx cylindrical. Corolla with a long tube; the orifice gaping; the upper lip emarginate; the lower three-lobed; the lateral lobes very short, reflexed; the intermediate one larger, er-

nate, and cuneate. Stamens four, the upper ones longer than the lower ones. (*Lindley.*)

DESCRIPTION, &c.—The plants belonging to this genus are all aromatic and stimulating; and they are mostly perennials. The name of *Nepeta* is derived from that of a town in Tuscany, near which some of the species are found.

1.—THE COMMON CATMINT, OR NEP. (NEPETA CATARIA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 137; 2nd ed., t. 843.

SPECIFIC CHARACTER.—Whorls stalked, crowded into spikes. Leaves finely downy, heart-shaped, stalked, with tooth-like serratures. (*Smith.*)

DESCRIPTION, &c.—This plant has a very strong aromatic odour, with which eats are very much delighted; and hence the popular English name of Catmint. The flowers are white, tinged with pink, and spotted with a darker red. The plant is a perennial, and it flowers in July and August. The leaves are woolly, and of a blueish green.

2. THE GROUND IVY. (NEPETA GLECHOMA, *Benth.*)

SYNONYMES.—*Glechoma hederacea*, *Lin.*; *Gill.*; *Alehoof.*

ENGRAVINGS.—Eng. Bot., t. 853; 2nd ed., t. 844; and our *fig. 5*, in Pl. 51.

SPECIFIC CHARACTER.—Proeumbent. Leaves round, crenellated, cor-

date. Whorls few-flowered. Calyx long, rather incurved. (*Lindley.*)

DESCRIPTION, &c.—This beautiful little plant is found abundantly in various parts of England, in dry soils, on banks, and under the shade of trees. The plant is aromatic in its qualities, and was formerly frequently taken

either steeped in ale, or as a substitute for tea. It is a dwarf perennial, growing close to the ground, and flowering in succession nearly all the summer. The colour of the flowers varies from a rich deep blue to lilac, pink, purple, and white.

GENUS X.

THE BASTARD BALM. (MELITTIS, *Lin.*)

Lin. Syst. DIDYNAMIA GYMNOSPERMIA.

GENERIC CHARACTER.—Calyx campanulate, large, with three or four lobes. Corolla twice as long as the calyx, the limb dilated, spreading; the upper lip flat, entire; the lower three-lobed; the lobes large and unequal. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species in this genus. *Melittis* is derived from the same Greek word as *Melissa*.

1.—THE COMMON BASTARD BALM. (MELITTIS MELISSOPHYLLUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 636, and t. 577; 2nd ed., t. 850, and 851; and our *fig. 1*, in Pl. 51.

SPECIFIC CHARACTER.—Calyx with three unequal, partly notched lobes. (*Smith.*)

DESCRIPTION, &c.—This very beautiful plant, and a variety of it, are only found in moist shady situations in the south and south-west of England, where they flower in May and June. The species has rather an unpleasant smell when fresh, but when dry its odour resembles that of new hay. It is a perennial, and it is often cultivated in gardens where the soil is moist, but it will not live in a dry situation exposed to the sun.

GENUS XI.

THE HEMP NETTLE. (GALEOPSIS, *Lin.*)

Lin. Syst. DIDYNAMIA GYMNOSPERMIA.

GENERIC CHARACTER.—Calyx campanulate, five-toothed, spiny. Corolla longer than the calyx; with the limb bilabiate; the upper lip vaulted and crenate; the lower with three unequal lobes. Anthers opening with transverse valves, hairy on their margins. (*Lindley.*)

DESCRIPTION, &c.—The plants belonging to this genus are all annuals, with very ornamental flowers. The name of *Galeopsis* signifies “like a weasel,” and it alludes to the shape of the flower. The genus is in the same Linnæan class and order as most of the other *Labiatae*.

1.—THE COMMON HEMP NETTLE. (GALEOPSIS TETRAHIT, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 207; 2nd ed., t. 830.

SPECIFIC CHARACTER.—Stem bristly, swelled below the joints. Corolla twice the length of the calyx; upper lip nearly straight. (*Smith.*)

DESCRIPTION, &c.—This plant is less ornamental than the other species. The flowers, which are produced in August, are of a pale pinkish white; the stem and leaves are covered with stiff bristles, and the whole plant has a very disagreeable smell when bruised. The Hemp Nettle is a troublesome weed in cultivated ground, on a dry gravelly soil.



1 Bastard Balm. 2 Bee Nettle. 3 Hedge woundwort 4 Spotted Dead Nettle.
5 Ground Ivy

2.—THE BEE NETTLE. (*GALEOPSIS VERSICOLOR*, *Curtis.*)

SYNONYMES.—*G. Tetrahit*, *Var. Lin.*; *G. grandiflora*, *Benth.*; *G. cannabina*, *Will.*; the large-flowered Hemp-Nettle.

ENGRAVINGS.—Eng. Bot., t. 667; 2nd ed., t. 831; and our *fig. 2*, in Pl. 51.

SPECIFIC CHARACTER.—Stem bristly, swelled below the joints. Corolla thrice the length of the calyx; upper lip nearly straight. (*Smith.*)

DESCRIPTION, &c.—This is one of the most beautiful of British plants; having large showy flowers, and growing to the height of two or three feet. It is generally found in corn fields on sandy soils, where it flowers from June till August. The name of Bee Nettle alludes partly to the appearance of the flower, which looks as though a bee were nestling in it, and partly to the bristly hairs with which the plant is covered.

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THE RED HEMP NETTLE. (*G. LADANUM*, *Lin.*)

The flowers are rose-coloured, and very pretty; they are produced from August till October. The stems are from six inches to a foot high.

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THE DOWNY HEMP NETTLE. (*G. VILLOSA*, *Lin.*)

This species has sulphur-coloured flowers, which appear in July and August. It is common in sandy corn fields in the northern and midland counties of England.

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GENUS XII.THE DEAD NETTLE. (*LAMIUM*, *Lin.*)

*Lin. Syst. DIDYNAMIA GYMNOSPERMIA.*

GENERIC CHARACTER.—Calyx five-toothed, awned, naked, spreading at the point. Corolla longer than the calyx; its orifice inflated; the upper lip vaulted, entire; the lower with two small lateral lobes, and a

large emarginate one in the middle. Anthers smooth or hairy at the back. Nuts three-eornered, trunecate, with sharp angles. (*Lindley.*)

DESCRIPTION, &c.—The plants belonging to this genus are well-known weeds, generally with ornamental flowers, which are much frequented by bees, but which have a heavy disagreeable smell. The name *Lamium* is taken from the Greek word for throat, in allusion to the shape of the flowers.

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1.—THE WHITE ARCHANGEL, OR WHITE DEAD NETTLE. (*LAMIUM ALBUM*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 768; 2nd ed., t. 832.

SPECIFIC CHARACTER.—Leaves heart-shaped, pointed, deeply serrated; petiolate. Flowers about twenty in a whorl. Calyx-tube shorter than

the belt. Upper lip of the corolla notched; lateral teeth of the lower lip lanceolate. (*Smith.*)

DESCRIPTION, &c.—This plant, which is common everywhere, has white flowers, which are produced abundantly throughout the summer and autumn. The plant is very ornamental, but it is so abundant that it is generally considered a troublesome weed.

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2.—THE SPOTTED DEAD NETTLE. (*LAMIUM MACULATUM*, *Lin.*)

SYNONYME.—*L. vulgatum*, *Benth.*

ENGRAVINGS.—Eng. Bot., t. 2550; 2nd ed., t. 833; and our *fig. 4*, in Pl. 51.

SPECIFIC CHARACTER.—Leaves heart-shaped, pointed, deeply serrated,

petiolate. Flowers eight or ten in a whorl. Calyx-tube curved, as long as the teeth. Upper lip of the corolla ericated; lateral teeth of the lower bristle-shaped. (*Smith.*)

DESCRIPTION, &c.—This very handsome plant has been only found at Bayswater and near Bristol. It is a perennial, growing about a foot high, and producing its handsome flowers in succession nearly all the summer.

THE RED DEAD NETTLE. (L. PURPUREUM, *Lin.*)

A very abundant plant, which continues producing its purplish-red flowers nearly all the summer. It is an annual, and it will grow in almost any soil and situation.

THE CUT-LEAVED DEAD NETTLE. (L. INCISUM, *Willd.*)

The flowers of this species are rose-coloured, and the leaves deeply notched.

THE GREAT HENBIT. (L. AMPLEXICAULE, *Lin.*)

An annual, which produces its pretty pale pink flowers, that are curiously marked with red at the tip, nearly all the summer. It grows only in sandy fields.

THE YELLOW ARCHANGEL, OR WEASEL SNOT. (L. GALEOBDOBOLON, *Crantz.*)

This very handsome plant is only found in moist woods and other shady moist places in England. It is a perennial, and flowers in May and June. The plant has been placed in different genera by different botanists.

## GENUS XIII.

THE MOTHERWORT. (LEONURUS, *Lin.*)*Lin. Syst. DIDYNAMIA GYMNOSPERMIA.*

**GENERIC CHARACTER.**—Calyx five-cornered, five-toothed, with a naked orifice. Corolla scarcely larger than the calyx, two-lipped; the upper lip villous, entire, concave; the lower reflexed, three-parted, nearly equal. Anthers smooth. Nuts truncale, with sharp angles.

**DESCRIPTION, &c.**—There is only one British species in this genus. The name of *Leonurus* is derived from two Greek words signifying Lion's tail, in allusion to the shape of the spike of flowers.

I.—THE COMMON MOTHERWORT. (LEONURUS CARDIACA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 286; 2nd ed., t. 826; and our *fig. 5*, in Pl. 50.

**SPECIFIC CHARACTER.**—Upper leaves lanceolate, either three-lobed or undivided. (*Smith.*)

**DESCRIPTION, &c.**—This is by no means common in Great Britain. It is an elegant plant, which is generally found in a gravelly or calcareous soil: its stems are erect, from a foot to two feet in height, and often branched. Its flowers are white and pink, the corolla being slightly tinged with the latter colour. It is a perennial, and flowers in July and August. It has a strong smell, and a bitter taste. It was formerly used in medicine, and is still esteemed in Russia a cure for hydrophobia.

## GENUS XIV.

THE WOUNDWORT. (STACHYS, *Lin.*)*Lin. Syst. DIDYNAMIA GYMNOSPERMIA.*

**GENERIC CHARACTER.**—Calyx nearly campanulate, five-eleft or five-toothed, acuminate. Corolla with a short tube; the upper lip vaulted, the lower three-lobed, with the sides reflexed. Nuts obsoletely cornered, ovate, or roundish. (*Dec.*)

**DESCRIPTION, &c.**—Most of the British species of this genus are perennial plants with ornamental flowers, having rather a disagreeable smell. The name of *Stachys* signifies a spike, from the flowers being produced in spikes.

1.—THE HEDGE NETTLE, OR HEDGE WOUND-WORT. (*STACHYS SYLVATICA, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 416; 2nd ed., t. 838; and our *fig. 3*, in Pl. 51.

SPECIFIC CHARACTER.—Six flowers in a whorl. Leaves heart-shaped, stalked. Stem solid. (*Smith.*)

DESCRIPTION, &c.—This plant is very common on hedge banks, or in plantations where the ground is moist. It grows with most luxuriance and assumes the richest colours in the shade. Its flowers are very handsome, but the smell is disagreeable. It is a perennial, and flowers in July and August.

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THE ANNUAL WOUND-WORT. (*STACHYS ANNUA, Lin.*)

This is a very doubtful native. It is an annual, and it produces its pale-yellow fragrant flowers in August.

THE MARSH OR CLOWN'S WOUND-WORT. (*STACHYS PALUSTRIS, Lin.*)

A handsome plant with rather large pinkish flowers, which appear in August. It is a perennial. This plant was formerly much esteemed as a vulnerary. Gerard says that it cured a wound in a week, that would not have healed in less than forty days with any other treatment.

DOWNTY WOUND-WORT. (*S. GERMANICA, Lin.*)

This plant differs from all the other species, in being covered with a dense woolly covering that renders the stem and leaves quite soft to the touch. It is generally found growing in chalky soils. It is a perennial, and produces its pretty pink flowers in August and September.

CORN WOUND-WORT. (*S. ARVENSIS, Lin.*)

A common annual weed in corn-fields, with small purple flowers which appear in July.

THE BETONY. (*S. BETONICA, Benth.—Syn. BETONICA OFFICINALIS, Lin.*)

The Wood Betony was formerly held in high esteem for its medical properties, and there were several old proverbs relating to it, that prove the high value that was set upon it. One of these proverbs “Sell your coat and buy betony,” is still sometimes repeated in the Midland counties; and the leaves are still occasionally used as tea. The flowers are rose-coloured, and they appear in July and August. The plant is a perennial, and it is common in woods and shady places in every part of England.

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GENUS XV.THE BLACK HOREHOUND. (*BALLOTA, Lin.*)

*Lin. Syst.* DIDYNAMIA GYMNOSPERMIA.

GENERIC CHARACTER.—Calyx funnel-shaped, dilated at the top, five-cornered, with ten streaks, and five teeth. Corolla two-lipped; the upper concave, crenate; the lower three-lobed; the middle lobe larger and emarginate. Nuts triangular. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species in this genus, the common Black Horehound, (*B. nigra, Linn.*). It is a perennial plant of no beauty, producing its reddish-purple or white flowers, in July and August, and having a very unpleasant smell, which is most powerful in hot weather. It is generally found in waste ground near a town. The name of *Ballota* signifies to reject.

## GENUS XVI.

WHITE HOREHOUND. (MARRUBIUM, *Lin.*)*Lin. Syst.* DIDYNAMIA GYMNOSPERMIA.GENERIC CHARACTER.—Calyx-teeth ten, bristle-shaped, hooked backwards. Leaves roundish-ovate, unequally serrated. (*Smith.*)

DESCRIPTION, &c.—The White Horehound (*M. vulgare*, *Lin.*) is well known as a remedy for coughs, and it is generally taken for that purpose, notwithstanding its very disagreeable taste. The flowers, which appear about September, are small, and of a yellowish-white; and the stem and leaves are covered with a thick white wool. The plant grows abundantly on rubbish by the road-sides, and in other dry places. The name of Marrubium is derived from a Hebrew word signifying a bitter juice.

## GENUS XVII.

THE SKULLCAP. (SCUTELLARIA, *Lin.*)*Lin. Syst.* DIDYNAMIA GYMNOSPERMIA.GENERIC CHARACTER.—Calyx short, with both lips entire; a concave scale lying on the upper lip. Corolla longer, curved at the base; limb bilabiate. (*Lindley.*)

DESCRIPTION, &c.—There are only two British species of this genus, and neither of them can be considered ornamental. The common Skulcap (*S. galericulata*, *Lin.*) has small blue flowers, and grows on the banks of rivers, and other moist places, preferring a gravelly soil. The other species (*S. minor*, *Lin.*) is less common, and the flowers are pink. Both species flower in July and August, and both are perennials.

## GENUS XVIII.

SELF-HEAL. (PRUNELLA, *Lin.*)*Lin. Syst.* DIDYNAMIA GYMNOSPERMIA.GENERIC CHARACTER.—Calyx bi-labiate; the upper lip flat, somewhat truncate, with three very short teeth; the lower bifid. Corolla with the upper lip concave; the lower three-lobed; the middle lobe being larger than the rest and emarginate. Filaments bearing a naked tooth below the anther. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species of this genus, viz., the common Self-heal (*P. vulgaris*, *Lin.*), which is abundant in meadows. It is a plant of no beauty, with purple flowers, which appear in June and July. It was formerly much esteemed as a remedy for sore throats, and hence, it is said, arises its generic name; which was originally Brunella, and derived from the German word braüne, signifying the Quinsy. The plant is a perennial.

The flowers of all the plants hitherto described have had a distinct calyx and corolla, and have belonged to the Dichlamydeæ, a word which signifies two coverings; those plants which remain to be described have only one covering to the stamens and pistil, and are therefore called Monochlamydeæ. Many of the orders in this division contain no plants having ornamental flowers, and will therefore be omitted. Among these may be mentioned

those containing only forest trees, such as the Elm and the Oak. The Sea Buckthorn (*Hippophae rhamnoides*, Lin.) has also been omitted, as it is only beautiful in its berries; and the Willows will not be given, from their great number, and the difficulty that exists in identifying them.

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## CHAPTER LXVIII.

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### THE SPURGE OLIVE TRIBE. (THYMITEÆ, *Juss.*)

**CHARACTER OF THE ORDER.**—Calyx inferior, tubular, coloured; the limb four-cleft, seldom five-cleft, with an imbricated aestivation. Corolla wanting, but sometimes with scales in the orifice. Stamens definite, inserted in the tube or the orifice, often eight, sometimes four, less frequently two; when equal to the segments of the calyx, or fewer, opposite to them; anthers two-celled, dchiscing lengthways in the middle. Ovarium simple, with one solitary pendulous ovulum; style one; stigma undivided. Fruit hard, dry, and nut-like, or drupaceous. Albumen none, or thin and fleshy; embryo straight, inverted; cotyledons plano-convex; radicle short, superior; plumula inconspicuous. Stem shrubby, very seldom herbaceous, with tenacious bark. Leaves without stipulae, alternate or opposite, entire. Flowers capitate or spiked, terminal or axillary, occasionally solitary. (*R. Br.*)

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### GENUS I.

#### THE SPURGE OLIVE. (DAPHNE, *Lin.*)

*Lin. Syst. OCTANDRIA MONOGYNIA.*

**GENERIC CHARACTER.**—Calyx four-lobed. Stamens eight. Style short, terminal. Berry with one cell, and one seed. (*Dec.*)

**DESCRIPTION, &c.**—The only British plants belonging to this genus are the Mezereon and the Spurge Laurel. The word Daphne is said to be derived from two Greek words signifying to crackle and to burn, from the noise the leaves make in burning; others more poetically attribute the name to Daphne, who, they say, was turned into a Spurge Laurel when she fled from Apollo, instead of into a Sweet Bay-tree, as is the common legend. The genus is placed in the Linnæan class Octandria, from its eight stamens; and in the order Monogynia, from its single style.

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#### 1.—THE MEZEREON, OR SPURGE OLIVE. (DAPHNE MEZEREUM *Lin.*)

**ENGRAVINGS.**—Eng. Bot., t. 1381; 2nd ed., t. 564; and our *fig. 1*, in Pl. 52.

**SPECIFIC CHARACTER.**—Flowers naked on the stem, sessile, about three together. Leaves lanceolate, deciduous. (*Smith.*)

**DESCRIPTION, &c.**—The Mezereon is a beautiful and well-known shrub, which is only occasionally found wild in Great Britain. The flowers appear in March, and in the wild plant they are always rose-coloured, though in gardens they vary to white. The bark and other parts of the plant are astringent, and as such, they are sometimes used in medicine. The plant is found in woods.

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#### THE SPURGE LAUREL. (D. LAUREOLA, *Lin.*)

This plant is also found in woods, and it generally grows in a stiff clayey soil. The berries are said to be poisonous, except to birds, and the root is an acrid cathartic. The flowers are of a yellowish-green, and they expand in March.

## CHAPTER LXIX.

THE POLYGONUM FAMILY. (POLYGONEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Calyx divided, inferior, imbricated in aestivation. Stamens definite, inserted in the bottom of the calyx. Anthers dehiscing lengthwise. Ovarium superior, with a single erect ovulum. Styles or stigmas several. Nut naked, or protected by the calyx. Seed with farinaceous albumen, rarely with scarcely any.

Embryo inverted, generally on one side. Plumula inconspicuous. Herbaceous plants, rarely shrubs. Leaves alternate, with ochreate stipules; the younger revolute at the edge. Flowers occasionally unisexual, often in racemes. (*Lindley.*)

DESCRIPTION, &c.—Among the British plants contained in this order are the Sorrel, the Dock, and the Buck-wheat. The Rhubarb and several other well-known exotic plants also belong to it.

## GENUS I.

THE DOCK. (RUMEX, *Lin.*)

*Lin. Syst.* HEXANDRIA TRIGYNIA.

GENERIC CHARACTER.—Calyx six-parted; the three outer segments somewhat cohering at the base; the three inner becoming enlarged after flowering. Stamens six. Styles three, reflexed. Stigmas three,

cut. Nut with three sharp angles. Embryo on one side of the albumen. (*Lindley.*)

DESCRIPTION, &c.—The name of Rumex signifies a spear, and alludes to the shape of the leaves; and the Linnaean class and order, Hexandria Trigynia, indicate that the plants have each six stamens and three styles. The British species are all perennials, with inconspicuous flowers, and they are divided into two sections, viz., the Docks, which have no peculiar flavour, and the Sorrels, which are remarkable for their acid juice. There are numerous kinds of Docks, but as they possess no beauty, and generally bear considerable resemblance to each other, I have, only thought it necessary to describe two species; and there are only two kinds of Sorrel.

1.—THE RED, OR COMMON DOCK. (RUMEX SANGUINEUS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1533; 2nd ed., t. 521.

SPECIFIC CHARACTER.—Leaves acute, slightly curled, stalked, and stained with crimson; the lower cordate-lanceolate. Flowering-bran-ches alternato, simple. Whorls distant, few flowered, the upper destitute

of leaves. Inner sepals becoming ovate-lanceolate, blunted, and entire, one generally bearing a large tubercle. (*Duby.*)

DESCRIPTION, &c.—This species is found in woods and shady pastures, also by the road side. It is a perennial, and it flowers in July. It grows two or three feet high.

2.—THE CURLED DOCK. (RUMEX CRISPUS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1998; 2nd ed., t. 523; and our fig. 2, Pl. 52.

SPECIFIC CHARACTER.—Leaves wavy, curled, acute; the lower oblong, lanceolate, stalked. Flowering branches alternate, double or triple, simple or divided. Whorls somewhat clustered, many-flowered;

the upper destitute of leaves. Inner sepals becoming roundish, cordate, entire, acute, with very large tubercles. (*Duby.*)

DESCRIPTION, &c.—This is one of the commonest species of English Docks, and it is found everywhere, in the most widely different soils and situations. There is a variety which is sometimes called *R. aquaticus*, which grows in ditches, and is a very handsome plant. The Curled Dock is distinguished from all the other species by its curled or wavy leaves. It is a perennial, growing two or three feet high, and flowering in June and July.



1. Mercurial, or Spurge-Olive 2. Curled Dock 3. Amphibious Persicaria?  
 4. Spotted Persicaria 5. Snake wood 6. Purple Spurge?



THE COMMON SORREL. (*R. ACETOSA, Lin.*)

This plant is common in meadows in every part of Great Britain. It closely resembles the common Dock in its flowers, but the leaves are smaller and very acid. It is a perennial, and flowers in June.

SHEEP'S SORREL. (*R. ACETOSELLA, Lin.*)

This species is nearly as common as the last, but it is found in drier places. In the autumn its leaves become red. It is a perennial, and flowers from May till July.

MOUNTAIN SORREL. (*OXYRIA RENIFORMIS, R. Br.*)

This plant is only found in clefts of rocks, and in moist bogs in the north of England, Wales, and Scotland. The plant is a perennial. The leaves are kidney-shaped, and agreeably acid. The flowers are crimson, but very small, and they are produced in June and July.

## GENUS II.

THE POLYGONUM. (*POLYGONUM, Lin.*)*Lin. Syst. OCTANDRIA MONOGYNIA.*

**GENERIC CHARACTER.**—Flowers hermaphrodite. Calyx monophyllous, | in part abortive. Fruit two or three-cornered, indehiscent, monosper- divided, persistent, generally petaloid. Stamens definite, either equal | mous nut. (*Meisner.*) in number to the segments of the calyx, or twice as many, but generally

**DESCRIPTION, &c.**—All the species are herbaceous plants, which, though most of them are only common weeds, have yet ornamental flowers. The seeds are very nutritious. The name of *Polygonum* signifies many-jointed. The species are divided into two sections.

§ 1.—*Styles mostly two. Nuts compressed.*1.—THE AMPHIBIOUS PERSICARIA. (*POLYGONUM AMPHIBIUM, Lin.*)

**ENGRAVINGS.**—Eng. Bot., t. 436; 2nd ed., t. 566; and our *fig. 3*, in Pl. 52.

**SPECIFIC CHARACTER.**—Styles two, united half-way up. Stamens five. Spike ovate. (*Smith.*)

**DESCRIPTION, &c.**—A beautiful plant which grows abundantly in ponds and ditches, flowering from June till September. It is very ornamental in the pond in Kensington Gardens, and its brown glossy fruit forms a favourite food for the Swans and other water-fowl. The species is a perennial, with long creeping roots, running deep into the mud, and a stem growing three feet or four feet high, so as to raise the leaves and flower-stems above the level of the water.

2.—THE SPOTTED PERSICARIA. (*POLYGONUM PERSICARIA, Lin.*)

**ENGRAVINGS.**—Eng. Bot., t. 756; 2nd ed., t. 567; and our *fig. 4*, | six. Clusters dense, ovate-oblong, erect, on smooth stalks. Stipulae in Pl. 52. | fringed. (*Smith.*)

**SPECIFIC CHARACTER.**—Styles two, united half-way up. Stamens

**DESCRIPTION, &c.**—This very common plant generally springs up in gardens and other cultivated places, which are somewhat neglected and rather damp. It is an annual, and it produces its pink and white flowers in July and August. It is a slender plant, growing two feet or three feet high, with a branched stem, and smooth leaves, that are generally marked with a dark spot in the shape of a horse-shoe. There is a nearly allied species, or perhaps only a variety called *P. lapathifolium*, the flowers of which are of a yellowish green.

THE WATER PEPPER, OR BITING PERSICARIA. (P. HYDROPIPER, *Lin.*)

This species has very small pink flowers, and a slender stem, with pale green, smooth, wavy leaves. Its taste is extremely pungent, as it abounds in an essential oil, which is contained in dot-like glands. It generally grows in ditches. It is an annual, and flowers in August and September.

THE CREEPING PERSICARIA. (P. MINUS, *Lin.*)

An annual plant, growing abundantly on gravelly soils, in the neighbourhood of London. It flowers in September.

§ 2.—*Styles three. Nut triangular.*3.—THE GREAT BISTORT OR SNAKE-WEED. (POLYGONUM BISTORTA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 509; 2nd ed., t. 571; and our *fig. 5*, in Pl. 52.

SPECIFIC CHARACTER.—Stem simple, with a single spiked cluster of flowers. Leaves ovate, wavy, running down into the foot-stalks. (*Smith.*)

DESCRIPTION, &c.—The Snake-weed is seldom found in the south of England, though it is abundant in the north. It is a very troublesome weed, particularly in rich soil, as it creeps rapidly under ground, and destroys the grass and other plants. The root is very astringent, and it is used in medicine. The plant is a perennial, and it flowers in June.

THE VIVIPAROUS BISTORT (P. VIVIPARUM, *Lin.*)

This is an Alpine plant, growing only in the mountainous districts of England and Scotland. The plant is a perennial with a tuberous root, and it produces its pale pink flowers in June and July. The seeds rarely ripen, the pistil of the flower generally changing into a bud which begins to throw out leaves before it falls to the ground; and hence it is called viviparous.

KNOT GRASS. (P. AVICULARE, *Lin.*)

A well-known annual weed, that grows in almost every kind of soil and situation, and continues flowering all the summer. There is a variety which is a perennial, and only grows near the sea.

BUCK-WHEAT OR BRANK. (P. FAGOPYRUM, *Lin.*)

This plant is supposed to be not a true native, though it is often found growing wild on dunghills, and other similar places. It is frequently cultivated to afford food for pheasants, and its flowers are said to be admirable for bees. It is an annual, and it produces its pale pink flowers in July and August.

BLACK BINDWEED OR CLIMBING BUCKWHEAT. (P. CONVOLVULUS, *Lin.*)

A very troublesome weed in osier holt, and other moist places, where it produces its small inconspicuous flowers from June till September. The stem and leaves are like those of a Convolvulus.

THE ORDER AMARANTHACEÆ, (*Juss.*),

Contains only one British plant; viz. the Wild Blite (*Amaranthus Blitum*, *Lin.*), which is not ornamental.

THE ORDER CHENOPODEÆ, (*Vent.*),

Contains five genera; viz., the Saltwort (*Salsola*, *Lin.*), the Glasswort or Marsh Samphire (*Salicornia*, *Lin.*), Goosefoot or Fat Hen (*Chenopodium*, *Lin.*), the Sea Beet (*Beta*, *Lin.*), and the Sea Purslane (*Atriplex*, *Lin.*).

THE ORDER SCLERANTHEÆ, (*Link.*),

Contains only two British plants; viz., the annual and perennial Knavel, neither of which possess any beauty.

THE ORDER URTICEÆ, (*Juss.*),

Contains the Pellitory of the Wall (*Parietaria*, Lin.), the Nettle (*Urtica*), and the Hop (*Humulus*, Lin.).

THE ORDER RESEDACEÆ, (*Lin.*),

Contains only two British plants; viz., the Dyer's Rocket, Yellow Weed, or Weld (*Reseda luteola*, Lin.), and the Base Rocket or Wild Mignonette (*R. lutea*, Lin.) Neither of these plants is ornamental.

## CHAPTER LXX.

THE SPURGE FAMILY. (EUPHORBIACEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Flowers monocious or dioecious. Calyx lobed, inferior, with various glandular or scaly internal appendages, sometimes wanting. Males. Stamens definite or indefinite, distinct or monadelphous; anthers two-celled. Females. Ovarium superior, sessile, or stalked, two, three, or more-celled; ovules solitary, or twin, suspended from the inner angle of their cell; styles equal in number to the cells, sometimes distinct, sometimes combined, sometimes none; stigma compound or single, with several lobes. Fruit,

consisting of two, three, or more dehiscent cells, separating with elasticity from their common axis. Seeds solitary or twin, suspended with an arillus; embryo inclosed in a fleshy albumen; cotyledons flat; radicle superior. Trees, shrubs, or herbaceous plants, often abounding in acrid milk. Leaves opposite or alternate, usually with stipulae. Flowers axillary or terminal, usually with bracteæ, sometimes inclosed within an involucrum. (*Lindley.*)

DESCRIPTION, &c.—There are three genera containing British plants in this order; viz. *Euphorbia*, *Mercurialis*, and *Buxus*; and of these only the first contains any ornamental plants: Dog's Mercury (*Mercurialis*), and the common Box (*Buxus*), having inconspicuous flowers. Even the genus *Euphorbia* only contains two or three ornamental species. Dog's Mercury is a poisonous plant.

## GENUS I.

THE SPURGE. (EUPHORBIA, *Lin.*)

*Lin. Syst.* MONOCIA MONANDRIA.

GENERIC CHARACTER.—Flowers collected in monocious heads, surrounded by an involucrum, consisting of one leaf with five divisions, which have, externally, five glands alternating with them. Males

naked, monandrous, articulated with their pedicel, surrounding the female, which is in the centre. Female naked, solitary. Ovarium stalked. Stigmas three, forked. Fruit hanging out of the involucrum, consisting of three cells, bursting at the back with elasticity, and each containing one suspended seed. (*Lindley.*)

DESCRIPTION, &c.—This genus contains upwards of four hundred species, many of the exotic kinds of which are highly ornamental in their flowers, though their stems are frequently of grotesque forms, and beset with spines. All the species abound in an acrid milky juice, which thickens by exposure to the air, and which in a nearly allied plant, *Siphonia elastica*, becomes the well-known Caoutchouc or Indian rubber of the Brazils; the Indian rubber brought from the East being the produce of a species of fig, *Ficus elasticus*. The name of *Euphorbia* is said to be derived from that of *Euphorbus*, physician to Juba, king of Mauritania. The genus is now generally placed in the Linnæan class *Monocia*, because the male and female flowers are distinct, though they are on the same plant; but it was formerly included in *Dodecandria Trigynia*, each head of flowers being regarded as a single flower, consisting of several stamens, and three styles. Only a few of the British species of *Euphorbia* are ornamental.

1.—THE PURPLE SPURGE. (*EUPHORBIA PEPLIS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 2002; 2nd ed., t. 1226; and our *fig.* 6, in Pl. 52.

SPECIFIC CHARACTER.—Branches firm. Leaves oblong, deeply cordate on one side at the base, entire, or slightly toothed towards the

base, between fleshy and membranous, very smooth. Fruit ovate, three-cornered, polished and quite smooth. Seeds ovate, somewhat four-cornered, smooth, whitish. (*Röper.*)

DESCRIPTION, &c.—An annual plant, with glaucous fleshy leaves tinged with either red or purple. It is only found on the sandy sea-coasts of Cornwall and Devonshire, where it flowers from July to September.

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THE SUN SPURGE, OR WART WORT. (*E. HELIOSCOPA, Lin.*)

This is a very common dwarf annual weed, which abounds in an acrid milky juice, much used in country places to destroy warts, and sometimes as a cure for the bite of a viper. It flowers in July.

THE IRISH SPURGE. (*E. HIBERNA, Lin.*)

This species is a perennial, the flowers of which are somewhat ornamental. It is a large plant, and flowers in June. The peasants of the county of Kerry, in Ireland, are said to use this species for stupifying fish, in the same way as the Chinese use the *E. piscatoria*.

CORAL-LIKE HAIRY SPURGE. (*E. CORALLOIDES, Lin.*)

A handsome plant, with widely-spreading branches and hairy capsules.

CYPRESS SPURGE. (*E. CYPARISSIAS, Lin.*)

This species is found abundantly in some of the midland counties and in Northumberland; and it is principally remarkable for its tufted stem and linear leaves, which bear considerable resemblance to those of a cypress.

SEA SPURGE. (*E. PARALIAS, Lin.*)

A singular plant, with fleshy, closely-imbricated leaves, and deep orange-coloured glands. It is a perennial, growing on the sandy sea-coasts of the south of England and Ireland, and flowering in August and September.

PETTY SPURGE. (*E. PEPLUS, Lin.*)

An annual weed, growing abundantly everywhere, with deep-green leaves, and the glands of the involucrum yellow. It flowers in August.

CAPER SPURGE. (*E. LATHYRIS, Lin.*)

A large and ornamental plant, the fruit of which, when pickled, forms a good substitute for capers, and is perfectly wholesome, though it is poisonous, from its acridity, when freshly gathered. It is a biennial, and flowers in July. It is sometimes called the Mole plant; because moles are said to avoid it.

WOOD SPURGE. (*E. AMYGDALOIDES, Lin.*)

A very handsome half-woody species, with red stems and yellowish flowers, which are produced in March and April. The plant is common in woods and thickets; and it has a variety with variegated leaves.

RED SHRUBBY SPURGE. (*E. CHORACIAS, Lin.*)

This species is still more handsome than the last. The plant grows about four feet high; the leaves are of a deep green and the flowers yellowish, but the glands of the involucrum are of a deep reddish purple. The species is a shrub, and it flowers in March and April. It is supposed not to be a true native; as it has only been found wild in Needwood Forest in Staffordshire, and in the woods near Godalming in Surrey, where it was discovered by my friends, the Misses Perry.

THE ORDER EMPETREÆ

Contains only one British plant, viz., the Crowberry or Creticberry (*Empetrum nigrum*, Lin.), a pretty little heath-like shrub, with pink flowers and black berries, which is most abundant on the mountainous heaths of Scotland.

THE ORDER ARISTOLOCHIÆ

Contains only two British plants, viz., Asarobacea (*Asarum europaeum*, Lin.), and the common Birth-wort (*Aristolochia Clematitis*, Lin.), neither of which are at all ornamental.

THE ORDER CERATOPHYLLEÆ

Contains only two British species of Hornwort, both aquatic weeds, densely clothed with multifid cellular leaves, and having inconspicuous flowers.

The orders including the Elm (*Ulmaceæ*), the Birch, the Alder, the Willow, and the Poplar (*Amentaceæ*) ; the Beech, the Sweet Chesnut, the Oak, the Hazel, and the Hornbeam (*Cupuliferae*) ; the Scotch Pine, the Juniper, and the Yew (*Coniferæ*), contain only forest trees and shrubs, the flowers of which are not ornamental.

THE MONOCOTYLEDONOUS PLANTS.

These plants vary exceedingly in their flowers, some being very ornamental, and others inconspicuous.

THE ORDER AROIDEÆ

Contains two well-known British plants, viz., the common Arum (*Arum maculatum*, Lin.), known by the popular names of Lords and Ladies, Dead Man's Fingers, Cuckoo-pint, and Wake Robin ; and the Sweet Flag, (*Acorus Calamus*, Lin.)

THE ORDER TYPHACEÆ

Contains three or four species of Bulrush, the commonest of which is commonly called Cat's-tail, or Reed-mace (*Typha latifolia*, Lin.), and several species of Bur-reed (*Sparganium*, Lin.), but none of these plants have ornamental flowers.

THE ORDER FLUVIALES

Contains only the different species of Pond-weed (*Potamogeton*, Lin.), Grass-wrack (*Zostera*, Lin.), (*Ruppia*, Lin.), and Horned Pond-weed (*Zannichellia*, Lin.) ; none of which are ornamental.

THE ORDER PISTIACEÆ

Contains only the different species of Duck-weed (*Lemna*, Lin.). The order JUNCAGINEÆ, contains the Arrow-grass (*Triglochin palustre*, Lin.), and two other inconspicuous bog plants.

CHAPTER LXXI.

THE WATER-PLANTAIN TRIBE. (ALISMACEÆ, R. Br.)

CHARACTER OF THE ORDER.—Sepals three, herbaceous, Petals three, petaloid. Stamens definite or indefinite. Ovaries superior, several, one-celled. Ovules solitary or two, attached to the suture, at a distance from each other. Styles and stigmas the same number as the ovaries.

Fruit dry, not opening, one or two-seeded. Seeds without albumen. Embryo shaped like a horse-shoe, undivided, with the same direction as the seed. Water plants. Leaves with parallel veins.

DESCRIPTION, &c.—The plants included in this order, though they are all aquatic, and tolerably common, deserve notice, as they are ornamental in their flowers or seeds. There are only two genera in this order, viz., *Alisma* and *Sagittaria*.

GENUS I.

THE WATER-PLANTAIN. (*ALISMA, Lin.*)*Lin. Syst. HEXANDRIA HEXAGYNIA.*

GENERIC CHARACTER.—Stamens six. Ovaries from six to twenty-five. Nuts distinct, generally one-seeded, deciduous, indehiscent. (*Lindley.*)

DESCRIPTION, &c.—The species are all perennials, growing in the water, with white or purplish flowers, and as they have generally each six stamens and six styles, the genus is placed in the Linnæan class and order Hexandria Hexagynia. The name of *Alisma* signifies a dweller in the water.

1.—THE GREATER WATER-PLANTAIN. (*ALISMA PLANTAGO, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 326; 2nd ed., t. 538.

SPECIFIC CHARACTER.—Leaves ovate, acute. Capsules obtusely triangular. (*Smith.*)

DESCRIPTION, &c.—A tall-growing plant, with a branched stem; broad, strongly ribbed leaves, and pale purplish flowers, which appear in July.

2.—STAR-FRUIT, OR THRUMWORT. (*ALISMA DAMASONIUM, Lin.*)SYNONYME.—*Actinocarpus Damasonium, Brown.*SPECIFIC CHARACTER.—Leaves oblong; heart-shaped at the base. Styles six. Capsules tapering. (*Smith.*)

DESCRIPTION, &c.—A perennial plant, growing in ditches and shallow pools, and flowering in June and July. The flowers are white, with a small yellow spot at the base of each petal, and they are produced in umbels. The plant, however, presents the most striking appearance when in seed, as the capsules have a very singular and star-like appearance, like those of the *Illicium anisatum*, or Star Aniseed of the chemists' shops.

3.—THE LESSER WATER-PLANTAIN. (*ALISMA RANUNCULOIDES, Lin.*)ENGRAVINGS.—Eng. Bot., t. 326; 2nd ed., t. 538; and our *fig. 1*, in Pl. 53.SPECIFIC CHARACTER.—Leaves linear-lanceolate. Capsules angular, acute, numerous, in a globular head. Stem none. (*Smith.*)

DESCRIPTION, &c.—This is a marsh plant, growing in moist ground, on the bank of a piece of water rather than in the water itself. It closely resembles the Greater Water-Plantain in its flowers, but the stem is shorter; the flowers, which are placed closer together, so as to form loose umbels, do not appear till August or September; and the fruit is round.

4.—THE FLOATING WATER-PLANTAIN. (*ALISMA NATANS, Lin.*)ENGRAVINGS.—Eng. Bot., t. 775; 2nd ed., t. 539; and our *fig. 5*, in Pl. 53.SPECIFIC CHARACTER.—Leaves elliptical, obtuse. Flower-stalks simple. Capsules striated. (*Smith.*)

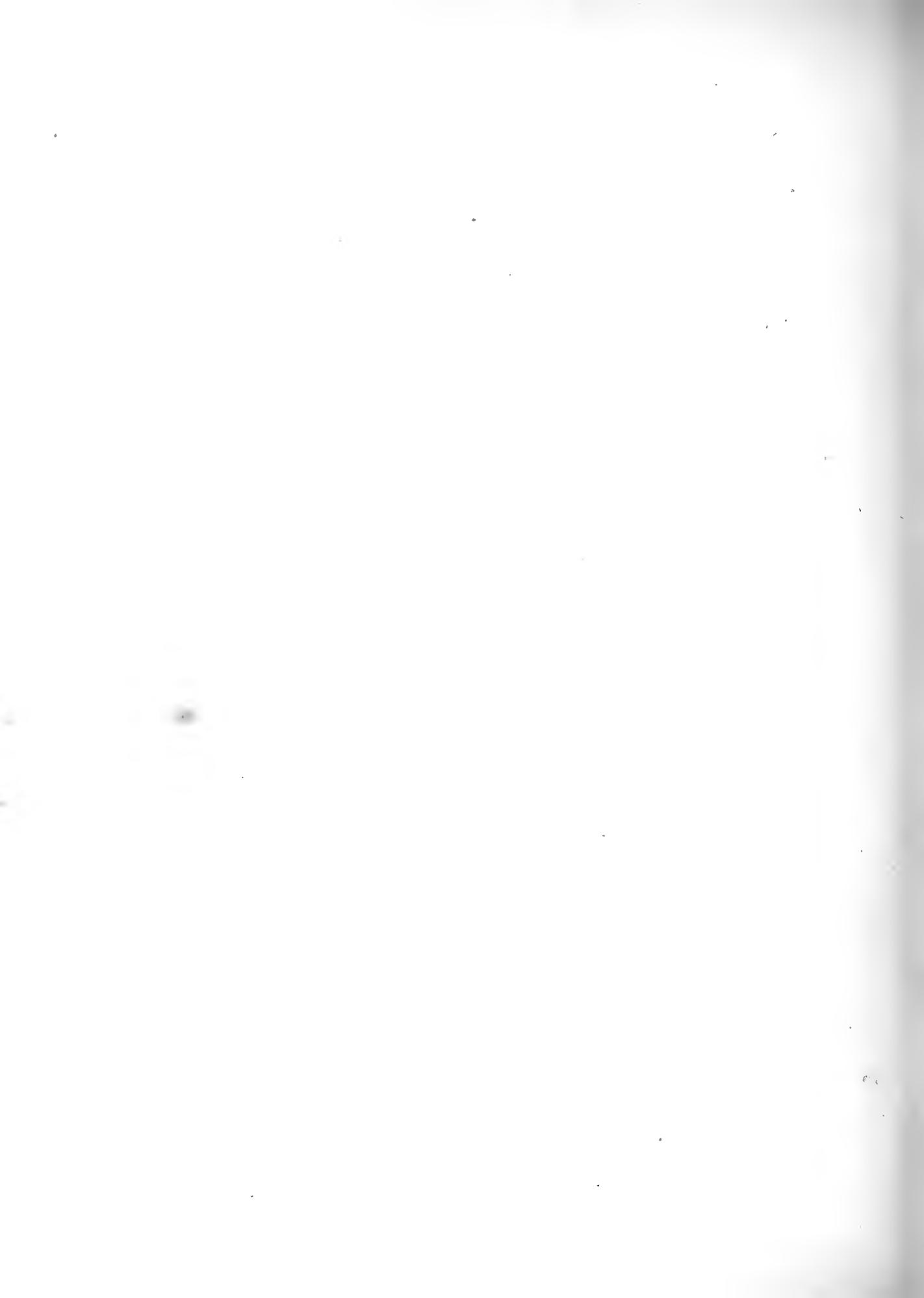
DESCRIPTION, &c.—This very pretty little plant is found in great abundance on the Alpine lakes of North Wales and Cumberland. It grows in clusters; long creeping runners proceeding from every plant, and each runner sending up leaves and a flower-shoot. The flowers are white, and larger than those of any other species of the genus; they open in July and August.

THE CREEPING WATER-PLANTAIN. (*A. REPENS, Smith.*)

This species, which is found on the margins of lakes in North Wales, has very small white flowers.



1. Lesser Water-plantain 2. Brook-head 3. Water-Soldier -
4. The Fragbit 5. Floating Water-plantain



GENUS II.

THE ARROW-HEAD. (SAGITTARIA, *Lin.*)*Lin. Syst. MONŒCIA POLYANDRIA.*

GENERIC CHARACTER.—Monœcious. Male. Stamens about twenty-four. Female. Ovaries numerous, seated upon a globose receptacle. Nuts compressed, bordered, one-seeded. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species in this genus. The name of *Sagittaria* is derived from *Sagitta*, an arrow, in allusion to the shape of the leaves. Its genus is placed in the Linnæan class Monœcia, because the male and female flowers are separate on the same plant; and in the order of Polyandria, on account of the numerous stamens. The rhizoma, or underground stem, of these plants is very fleshy, and it is used as food in several countries.

1.—THE COMMON ARROW-HEAD. (SAGITTARIA SAGITTIFOLIA, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 84; 2nd ed., t. 1318; and our *fig.* 52, in Pl. 53.SPECIFIC CHARACTER.—Leaves arrow-shaped, acute. (*Smith.*)

DESCRIPTION, &c.—This very handsome plant is found abundantly on the borders of rivers and in shallow pools and ditches, in almost every part of England and Ireland. The plant is a perennial, with large white flowers, which appear in July and August.

CHAPTER LXXII.

THE FROG-BIT FAMILY. (HYDROCHARIDÆ, *R. Br.*)

CHARACTER OF THE ORDER.—Flowers hermaphrodite, or unisexual. Sepals three, herbaceous. Petals three, petaloid. Stamens definite or indefinite. Ovary single, inferior. Stigmas several. Ovules indefinite. | Fruit dry or succulent; indehiscent, with one or more cells. Seeds without albumen. Embryo undivided. Floating plants. Leaves with parallel veins.

DESCRIPTION, &c.—This order possesses only two genera of British plants, both of which are perennial aquatics.

GENUS I.

THE WATER SOLDIER. (STRATIOTES, *Lin.*)*Lin. Syst. POLYANDRIA HEXAGYNIA.*

GENERIC CHARACTER.—Spatha compressed, persistent, deeply parted in two, keeled, one-flowered. Perianthium tubular. Sepals three, minute, green. Petals three, large. Stamens about twenty, inserted | into the apex of the tube, or margin of the ovary. Styles six, bifid. Fruit fleshy, taper-pointed, six-cornered, six-celled. Seeds somewhat angular, attached to the dissepiments.

DESCRIPTION, &c.—There is only one species in this genus. The name of *Stratiotes* is from a Greek word, meaning an army, in allusion to the sharpness of the leaves, which often wound the fingers when touched. The Genus is placed in the Linnæan class Polyandria, from the number of the stamens; and in the order Hexagynia, from its six styles.

1.—THE WATER ALOE, OR WATER SOLDIER. (STRATIOTES ALOIDES, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 379; 2nd ed., t. 771; and our *fig.* 3, in Pl. 53.SPECIFIC CHARACTER.—Leaves sword-shaped, channelled, with a prominent rib, and sharp marginal prickles. (*Lindl.*)

DESCRIPTION, &c.—This is a very singular plant, as it is often found floating in the water, without appearing

to have any fixed locality. The floating plants have, however, risen from a parent plant, which, being rooted in the mud at the bottom, has sent forth long runners, each when it has risen to the surface becoming detached, and sending out flowers and roots. As soon as the plant has flowered it sinks to the bottom, and either ripens its seeds, or produces a number of off-sets, as its parent plant had done before it. The male and female flowers are occasionally on different plants.

GENUS II.

THE FROG-BIT. (HYDROCHARIS, *Lin.*)

Lin. Syst. DIECIA ENNEANDRIA.

GENERIC CHARACTER.—Diceious. Male. Spathe two-parted, three-flowered. Perianthium of six pieces. Stamens twelve, or by abortion nine, placed in a triple order upon the rudiments of an abortive ovary. | Female. Spathe sessile, one-flowered. Perianthium like that of the male, with six filiform abortive stamens. Stigmas six, wedge-shaped, bifid. Fruit leathery, six-celled, many-seeded. (*Lindley.*)

DESCRIPTION, &c.—There is only one species in this genus. The name of *Hydrocharis* signifies Grace of the Water, and is therefore well applied to this very pretty plant. The genus is placed in the Linnæan class *Dicecia*, from its male and female flowers being distinct and on different plants; and in the order *Enneandria*, from the stamens being generally nine.

1.—THE COMMON FROG-BIT. (HYDROCHARIS MORSUS RANÆ, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 808; 2nd ed., t. 1398; and our *fig.* 4, in Pl. 53.

SPECIFIC CHARACTER.—The same as the generic character, there being only one known species.

DESCRIPTION, &c.—This plant differs from most other aquatics, in the whole plant floating on the surface of the water, and sending down its long fibrous roots perpendicularly to the mud below; instead of the plant growing in the mud, and having a long stem rising to the surface of the water. The species is common in ponds and ditches in every part of England and Ireland. The flowers, which appear in July, are large and handsome, but do not last long. The leaves are purplish and dotted on the under surface, and the whole plant is decidedly ornamental. It is a perennial, and flowers in July.

CHAPTER LXXIII.

THE IRIS FAMILY. (IRIDEÆ, *Juss.*)

CHARACTER OF THE ORDER.—Perianthium superior; petaloid, in six parts, sometimes irregular, deciduous; the three petals occasionally abortive. Stamens three, inserted in the sepals; filaments distinct or connate; anthers turned outwards. Ovarium three-celled, many-seeded; style one or three, united at the base, and petaloid; stigmas either simple or three-lobed. Capsule three-celled, three-valved, with

a loculicidal dehiscence. Seeds attached to the axis of the fruit; albumen horny or densely fleshy; embryo included, undivided. Herbaceous plants, very seldom under-shrubs. Roots tuberous or fibrous. Leaves equidistant, distichous. Bractæ usually spataceous. Flowers brightly-coloured. (*Lindley.*)

DESCRIPTION, &c.—The three genera belonging to this order all contain ornamental plants, and most of them have tuberous or fleshy roots.



1. Yellow Water Iris. 2. Stinking Iris. 3. The Saffron.
4. The Yellow Crocus. 5. The early Crocus.

GENUS I.

THE FLOWER DE LUCE. (*IRIS, Lin.*)*Lin. Syst. TRIANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Perianthium six-parted; the sepals larger and spreading, the petals smaller and erect. Stamens distinct, opposite the sepals. Styles three, very large, petaloid, opposite the sepals, and incumbent upon the stamens. (*Lin.*)

DESCRIPTION, &c.—There are only two British species of this genus, both of which are perennial plants, with showy flowers, to the variety and brilliancy of the colours of which the name of Iris, which signifies an eye, alludes. The genus is placed in the Linnaean class Triandria, from its three stamens; and in the order Monogynia, because it has only one style.

1.—THE YELLOW WATER IRIS, OR COMMON FLOWER DE LUCE. (*IRIS PSEUD-ACORUS, Lin.*)ENGRAVINGS.—Eng. Bot., t. 578; 2nd ed., t. 47; and our *fig. 1*, in Pl. 54.SPECIFIC CHARACTER.—Corolla beardless; inner segments smaller than the stigmas. Leaves sword-shaped. Seeds angular. (*Smith.*)

DESCRIPTION, &c.—This very showy plant is extremely common in ditches, shallow ponds, and the marshy ground near rivers. It was formerly esteemed in medicine, but it is now seldom used; though the root is a powerful cathartic, and also an astringent. In some places this plant is called the yellow corn-flag; and its seeds are roasted as a substitute for coffee. There is one variety of this species, which has pale blue flowers, and another which has white ones.

2.—THE STINKING IRIS. (*IRIS FETIDISSIMA, Lin.*)

SYNONYMS.—Gladwyn; Roast-beef plant.

ENGRAVINGS.—Eng. Bot., t. 596; 2nd ed., t. 48; and our *fig. 2*, in Pl. 54.

SPECIFIC CHARACTER.—Corolla beardless; inner segments spreading.

Stem with one angle. Leaves sword-shaped. Seeds globosc. (*Lindley.*)

DESCRIPTION, &c.—This species is only found in groves, and it is most common in Devonshire. The leaves when slightly bruised smell somewhat like roast beef; but when too strong, this smell becomes offensive. The flowers, which are not so showy as those of the preceding species, appear in May; and they are succeeded by deep orange-coloured seeds, which, when the capsules open in autumn, become very ornamental. The plant is common in Devonshire, but rare in other parts of England.

GENUS II.

THE BULBOCODIUM. (*TRICHONEMA, Ker.*)*Lin. Syst. TRIANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Perianthium in six deep equal segments; longer than the tube. Filaments downy. Stigmas very slender, deeply cloveu. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species in this genus, viz., the channel-leaved Bulbocodium or Dwarf Ixia, (*T. Bulbocodium, Ker.*); and this can scarcely be called a native, as it has only been found on grassy hillocks in Guernsey. The plant is a perennial, and the stem is thickened at the base into what is called a corm, or solid bulb. The flowers, which are whitish, and rather pretty though small, appear in March or April. The name of Trichonema is derived from two Greek words, signifying a hair-like filament. The genus is placed in the same Linnaean class and order as the last.

GENUS III.

THE CROCUS. (CROCUS, *Lin.*)*Lin. Syst. TRIANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Perianthium with a slender tube twice as long as the limb. Limb six-parted, equal, inflated, erect. Stigmas three, convolute, many-lobed. (*Lindley.*)

DESCRIPTION, &c.—Notwithstanding the great number of Crocuses cultivated in our gardens, only three or four are natives of Great Britain. The name of Crocus is from a Chaldean word signifying the plant. The genus is in the same Linnæan class and order as the last.

1.—THE SAFFRON. (CROCUS SATIVUS, *Lin.*)SYNONYMES.—*C. officinalis*, *Hudson*; *C. autumnalis*, *Smith*.ENGRAVINGS.—Eng. Bot., t. 46; 2nd ed., t. 43; and our *fig. 3*, in Pl. 54.SPECIFIC CHARACTER.—Stigma prominent, laterally in three deep, linear, notched segments. (*Lindley.*)

DESCRIPTION, &c.—The Saffron is distinguished from the common Autumn Crocus by its stigma, which is very large and three-cleft, hanging out on one side of the flower. This stigma, when dried, is the Saffron. It is only found wild in England in the North, and at Saffron Walden, where it is largely cultivated.

2.—THE SMALL YELLOW CROCUS. (CROCUS AUREUS, *Lin.*)SYNONYME.—*C. luteus*, *Lindley*.ENGRAVINGS.—Eng. Bot. Supp., t. 2646; 2nd ed., t. 44*; and our *fig. 4*, in Pl. 54.

SPECIFIC CHARACTER.—Stamens spreading. Stigma small, below the tops of the anthers. Coats of the root elongated, stiff, membranous, becoming ragged.

DESCRIPTION, &c.—A pretty little plant with golden-yellow flowers, which is supposed not to be a true native, but is found growing apparently wild in Sir H. Bunbury's park at Barton Hall, in Suffolk, along with *C. praecox*, both flowering in March.

3.—THE EARLY PURPLE CROCUS. (CROCUS PRÆCOX, *Lin.*)SYNONYMS.—*C. reticulatus*, *Smith*; *C. minimus*, *Curtis*; annual Crocus.ENGRAVINGS.—Eng. Bot. Supp., t. 2645; 2nd ed., t. 44**; and our *fig. 5*, in Pl. 54.

SPECIFIC CHARACTER.—Stigma above the anthers. Segments of the flower of equal length. Root-coats coriaceous, short, dividing into

rings at the base. (*Smith.*)

DESCRIPTION, &c.—This pretty little plant has been only found wild in Sir H. Bunbury's park. It is easily distinguished from all the other species by its bulbs or corms. "The root-coats," says Sowerby, "are of a peculiar subcoriaceous texture, wholly free from fibres; the rings into which they divide at the base are perfectly regular, and very neat." The flowers are small, but very pretty.

THE PURPLE SPRING CROCUS. (*C. VERNUS*, *Willd.*)

This very handsome Crocus grows wild near Nottingham, where the meadows are covered with it. It is supposed to be a true native. It is a perennial, and flowers in March, about a fortnight later than the early Crocus.

THE AUTUMN CROCUS. (*C. NUDIFLORUS*, *Smith.*)

This plant always sends up its flowers before its leaves, and thus presents the singular appearance of naked flowers growing out of the ground without either stems or leaves. The leaves do not appear till the segments of the flowers have fallen, but they remain above ground till the seed is ripe.

CHAPTER LXXIV.

THE ORCHIS FAMILY. (ORCHIDÆ, *Juss.*)

CHARACTER OF THE ORDER.—Perianthium superior, ringent. Sepals three, usually coloured, of which the odd one is uppermost in consequence of a twisting of the ovary. Petals three, usually coloured, of which two are uppermost in consequence of a twisting of the ovary, and one, called the lip, undermost; this latter is frequently lobed, always of a different form from the others, and very often spurred at the base. Stamens three, united in a central column, the two lateral usually abortive, the central perfect; or the central abortive and the two lateral perfect; anther either persistent or deciduous, two, or four,

or eight-celled; pollen either powdery or cohering in definite or indefinite waxy masses, either adhering to a gland or loose in their cells. Ovary one-celled, with three parietal placentæ; style forming part of the column of the stamens; stigma a viscid space in front of the column, communicating directly with the ovary by a distinct open canal. Capsule inferior, bursting with three valves, and three ribs. Seeds parietal, very numerous; testa loose, reticulated, contracted at each end; albumen none; embryo a solid undivided fleshy mass.

DESCRIPTION, &c.—The construction of the flowers of the plants belonging to this order is so curious, and, by the twisting of the incipient seed-vessel, the sepals and petals are often so distorted, that in the British species they have been fancied to represent bees, flies, lizards, monkeys, and even men. Their botanical details are equally remarkable; and the pollen is generally a waxy mass, which appears to have no connection with the stigma. The foreign Orchidaceæ are still more beautiful and more remarkable than the British kinds; and they are generally epiphytes hanging suspended from the branches of trees, with their roots exposed to the air. There are innumerable genera of these plants to be found in the dense woods of South America; and seventeen genera are natives of Great Britain. All the British plants belonging to this order are in the Linnæan class Gynandria, signifying that the stamens grow upon the pistil; and all, except Cypripedium, are in the order Monandria, because the stamens form a single column.

GENUS I.

THE GOODYERA. (GOODYERA, *R. Br.*)

Lin. Syst. GYNANDRIA MONANDRIA.

GENERIC CHARACTER.—Sepals spreading, ovate, herbaceous. Petals erect; lip saccate, entire. Column taper, distinct, with two teeth at the apex. Stigma prominent, roundish. (*Lindley.*)

DESCRIPTION, &c.—There is only one species in this genus (*G. repens*, *R. Br.*), and this plant, which possesses no beauty, has been successively placed in two other genera (viz., *Neottia* and *Satyrium*), before it was fixed in *Goodyera*; so named from a Mr. John Goodyer.

GENUS II.

LADY'S TRESSES. (SPIRANTHES, *Rich.*)

Lin. Syst. GYNANDRIA MONANDRIA.

GENERIC CHARACTER.—Sepals coloured, and petals converging, parallel with the lip; lip shovel-shaped, unguiculate, with two fleshy projections at the base. Column taper, club-shaped, distinct, with two teeth at the apex. Stigma prominent, rostrate. (*Lindley.*)

DESCRIPTION, &c.—There are only two species in this genus, which has been separated from *Neottia* on account of the shape of the flower-spike of *S. autumnalis*, which bears some resemblance to a lady's ringlet; and from this spiral stem the genus is called *Spiranthes*.

1.—LADY'S TRESSES. (*SPIRANTHES AUTUMNALIS*, *Rich.*)

SYNONYMS.—*Neottia spiralis*, *Swartz*; *Ophrys spiralis*, *Lin.* | SPECIFIC CHARACTER.—Leaves ovate, stalked. Spike twisted, uni-
ENGRAVINGS.—Eng. Bot., t. 541; 2nd ed., t. 1212; and our fig. 4, | lateral. Bracteas downy, tumid. Lip ovate, entire. (*Smith.*)
in Pl. 55.

DESCRIPTION, &c.—This plant, though not possessing any great beauty, is yet well worth notice from the remarkable shape of its spike of flowers; which, with the large bracts of the flowers, takes somewhat of a cork-screw appearance, like a lady's ringlet. The plant is tolerably abundant in open pastures on a chalky or gravelly soil; and it flowers in August and September. It has tuberous roots.

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THE PROLIFEROUS LADY'S TRESSES. (*S. GEMMIPARA*, *Lindl.*)

This species is only found near Bantry Bay, in Ireland. The flowers and flower-stem are rather larger than those of the preceding species, and the flowers are more yellow. It flowers in July.

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GENUS III.THE BIRD'S-NEST. (*NEOTTIA*, *Lin.*)

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*Lin. Syst.* GYNANDRIA MONANDRIA.

GENERIC CHARACTER.—Sepals and petals brown, converging; lip dependent, two-lobed, concave at the base. Column taper, erect, four times as long as the stigma. Stigma distinctly two-lipped; the upper lip narrower than the lower. Anthers naked. (*Lindl.*)

DESCRIPTION, &c.—There is only one species in this genus. The name of *Neottia* is from a Greek word signifying a bird's-nest, in allusion to the appearance of the roots.

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1.—THE COMMON BIRD'S-NEST. (*NEOTTIA NIDUS AVIS*, *Lindl.*)

SYNONYMS.—*Epipactis nidus avis*, *Swartz*; *Ophrys nidus avis*, *Lin.*; *Listera nidus avis*, *Smith.*

ENGRAVINGS.—Eng. Bot., t. 48; 2nd edit., t. 1215; and our fig. 3, in Pl. 55.

SPECIFIC CHARACTFR.—Leaves none. Stem clothed with sheathing scales. Lip with two spreading lobes. (*Lindl.*)

DESCRIPTION, &c.—This very curious plant is a leafless brown parasite, with succulent, long, clustered roots, that bear some resemblance to birds in a nest. It is generally found in beech woods, on a chalky or loamy soil. It produces its dull brownish flowers in May and June.

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GENUS IV.THE TWAY-BLADE. (*LISTERA*, *R. Br.*)

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Lin. Syst. GYNANDRIA MONANDRIA.

GENERIC CHARACTFR.—Sepals and petals herbaceous, spreading; lip from the back of the column. Leafy herbaceous plants with fascicled dependent, two-lobed. Column taper, erect, much shorter than the fibrous roots. (*Lindl.*)
stigma. Stigma plain, ovate. Anther covered by a hood proceeding

DESCRIPTION, &c.—There are two species in this genus, viz., *L. ovata* and *L. cordata*, *R. Br.*; neither of which can be called ornamental. In both, the labellum or lower lip is very long, and cut into two deep lobes, whence the popular name. Both species are common on moist heaths, particularly in Scotland; and they flower from June till August. The name of *Listera* was given to this genus in honour of Dr. Martin Lister, a British naturalist.



1 Marsh Hellebore 2 Purple Hellebore 3 Bird's Nest 4 Lady's Mantle.

GENUS V.

THE CORAL-ROOT. (*CORALLORHIZA, Haller.*)*Lin. Syst. GYNANDRIA MONANDRIA.*

GENERIC CHARACTER.—Sepals and petals more or less coloured, spreading; the lower sepals cohering at the base; lip more or less lobed, producing from the base a spur, which is more or less adherent to the ovary. Column plano-convex, entire. Pollen masses spherical. Anther round, two-celled, with two anterior valves. (*Lindl.*)

DESCRIPTION, &c.—There is only one British species of this genus; viz., the common Coral-root, (*C. innata*, R. Br.), a plant with small white flowers, and a branched root resembling coral. It is found in boggy woods in Scotland, where it flowers from May to July. The botanic name of this genus is derived from two Greek words, signifying Coral-root.

GENUS VI.

HELLEBORINE. (*EPIPACTIS, Swartz.*)*Lin. Syst. GYNANDRIA MONANDRIA.*

GENERIC CHARACTER.—Sepals and petals spreading, or converging, more or less coloured; lip inflated at the base, either entire or with three lobes, of which the middle one is articulated with the others. Column plano-convex, with two teeth at the apex. Pollen masses acuminate. Anther two-celled. (*Lindl.*)

DESCRIPTION, &c.—There are numerous British plants belonging to this genus, all of which have a fleshy underground stem, and fibrous roots; and they were all included in the Linnaean genus Serapias. The name of Epipactis is said to have been applied to some plants of this genus, by the ancient Greeks.

1.—THE BROAD-LEAVED HELLEBORINE. (*EPIPACTIS LATIFOLIA, Swartz.*)SYNONYME.—*Serapias latifolia, Lin.*

ENGRAVINGS.—Eng. Bot., t. 269; 2nd ed. t. 1216.

SPECIFIC CHARACTER.—Leaves ovate, clasping the stem. Lower

bracteas longer than the drooping flowers. Lip shorter than the sepals,

entire, with a minute point. Ovary downy. (*Lindl.*)

DESCRIPTION, &c.—A tolerably abundant plant in shady woods, and chiefly in calcareous soils. It is a perennial, and it produces its greenish-red flowers in July and August.

2.—THE MARSH HELLEBORINE. (*EPIPACTIS PALUSTRIS, Swartz.*)SYNONYMS.—*Serapias palustris, Scap.*; *S. longifolia, Lin.*

ENGRAVINGS.—Eng. Bot., t. 270; 2nd ed., t. 1217; and our fig. 1, in Pl. 55.

SPECIFIC CHARACTER.—Leaves lanceolate, clasping the stem.

Flowers drooping. Lip rounded, obtuse, crenate, as long as the petals, with a notched protuberance on the disk. (*Smith.*)

DESCRIPTION, &c.—This handsome plant is found abundantly in marshes and swampy meadows, particularly in calcareous soils. The flowers appear in July.

3.—THE LARGE WHITE HELLEBORINE. (*EPIPACTIS GRANDIFLORA, Smith.*)SYNONYMS.—*E. pallens, Swartz.*; *Serapias grandiflora, Lin.*; *S. longifolia, Huds.*; *S. lanceifolia, Murray.*

SPECIFIC CHARACTER.—Leaves elliptic-lanceolate. Bracteas longer

than the smooth ovary. Flowers sessile, erect. Lip abrupt, shorter than the sepals, with elevated lines on the disk. (*Lindl.*)

DESCRIPTION, &c.—A handsome plant, with large yellowish-white flowers which appear in June and July. The species is generally found in woods on a chalky soil.

4.—THE NARROW-LEAVED WHITE HELLEBORINE. (*EPIPACTIS ENSIFOLIA*, *Swartz.*)

SYNONYMES.—*E. xiphophylla*, *Swartz*; *Serapias ensifolia*, *Murray*;
S. grandiflora, *Fl. Don.*

ENGRAVINGS.—Eng. Bot. t. 494; 2nd ed., t. 1219.

SPECIFIC CHARACTER.—Leaves lanceolate, pointed. Bracteas minute, much shorter than the smooth ovary. Flowers sessile, erect. Lip abrupt, shorter than the sepals, with elevated lines on the disk.

DESCRIPTION, &c.—This species is often confounded with the last, which it much resembles in its large white flowers, which appear in May and June. The plant is, however, of a different habit of growth, and even its flowers may be readily distinguished by a yellow, crescent-shaped spot at the extremity of the lip. This species is most abundant in sub-alpine woods on a calcareous soil.

5.—THE PURPLE HELLEBORINE. (*EPIPACTIS RUBRA*, *Smith.*)

SYNONYME.—*Serapias rubra*, *Lin.*

ENGRAVINGS.—Eng. Bot. t. 437; 2nd edit., t. 1220; and our fig. 2, in Pl. 55.

SPECIFIC CHARACTER.—Leaves lanceolate. Bracteas longer than the downy ovary. Flowers sessile, erect. Lip tapering to a point, with elevated undulating lines on the disk. (*Smith.*)

DESCRIPTION, &c.—This species, though one of the handsomest, is at the same time one of the rarest in the genus. The flowers are not numerous, but they are large and showy, and they appear in May and June. The plant is only found wild in Gloucestershire, and in some places in the North of England, where the soil is poor and stony.

THE PURPLE-LEAVED HELLEBORINE. (*E. PURPURATA*, *Smith.*)

This species is very closely allied to *E. latifolia*; it differs, however, in the purple hue of the leaves, and in a deep crimson stain on the lip. It has only been found growing as a parasite on a stump of hazel or maple in some woods in Worcestershire, and in those of Woburn Abbey.

GENUS VII.

THE ORCHIS. (*ORCHIS*, *Lindl.*)*Lin. Syst. GYNANDRIA MONANDRIA.*

GENERIC CHARACTER.—Sepals and petals ringent, coloured; lip lobed, spurred at the base. Pollen masses with two glands, inclosed in a common pouch. (*Lindl.*)

DESCRIPTION, &c.—Strange as are the forms of the flowers belonging to all the different genera included in this order, there is perhaps none in which the frolics of nature have been more fully displayed than in the genus *Orchis*, the different species of which have flowers of the most grotesque forms. The name of *Orchis* is said to have been applied to this genus by the ancients.

1.—THE MEADOW OR FOOL ORCHIS. (*ORCHIS MORIO*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 2059; 2nd edit., t. 1194.

SPECIFIC CHARACTER.—Knobs of the root oval. Lip four-cleft, somewhat crenate; spur obtuse, ascending. Sepals many-ribbed, converging. (*Lindl.*)

DESCRIPTION, &c.—This species is found abundantly in moist meadows in various parts of England, and indeed it is one of the most common kinds. The flowers, which appear in May and June, are purple, except the centre of the lip, which is white with purple spots.



1 Early Purple Orchid 2 Marsh Orchid 3 Monkey Orchid 4 Lizard Orchid.

2.—THE EARLY PURPLE ORCHIS. (*ORCHIS MASCULA*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 631; 2nd ed., t. 1195; and our *fig. 1*, in Pl. 56. | somewhat crenate; spur obtuse. Sepals three-ribbed; two lateral ones reflexed upwards.

SPECIFIC CHARACTER.—Knobs of the root oval. Lip four-cleft,

DESCRIPTION, &c.—This is, perhaps, the most common of all the kinds of *Orchis*, as it is found in almost every part of the kingdom, even where the soil is dry, though of course the plants are much smaller in such places. The flowers vary from a rich deep purplish-red, through several fainter shades, to almost white, but the lip is always pale at the base, with purple dots; and they are always fragrant early in the morning, and in the evening after sunset: they appear in May and June. All the kinds of *Orchis* have two tubers attached to the base of the stem just below the point from which the fibrous roots spring. From one of these tubers rises the flower-stalk of the current year; and in the other is formed the flower of the succeeding year. When the flower fades, the tuber from which it sprang withers, but as a new tuber has been forming during the summer, there are still two left; though, as the third tuber always forms on the side opposite to the one that decayed, the plant advances a little every year, and in the course of a few years, it has made considerable progress. The tubers of the early Purple *Orchis* differ from those of most of the other species, except *O. morio*, in not growing close together, but the new tuber is attached to a kind of stalk, and is separated an inch or more from the old one. The tubers consist of a farinaceous or floury substance, from which saloop is manufactured—a kind of paste which, when dissolved in boiling water, forms a most nutritious drink. It is said that one ounce of saloop mixed with two quarts of hot water will afford a day's nourishment for a man.

3.—THE MONKEY ORCHIS. (*ORCHIS MACRA*, *Lindl.*)

SYNONYMS.—*O. militaris*, β , Eng. Bot.; *O. tephrosanthes*, *Smith*.

ENGRAVINGS.—Eng. Bot., t. 1873; 2nd ed., t. 1198; and our *fig. 3*, in Pl. 56.

SPECIFIC CHARACTER.—Knobs of the root oval. Lip nearly hairless, covered with warts, with linear segments. Spur obtuse, half the length of the ovary. Sepals connivent, very tapering. (*Lindl.*)

DESCRIPTION, &c.—This very curious plant is found on the chalk hills of Kent, Bedfordshire, Berkshire, and Oxfordshire. The lip of the flower is cut into several segments, which curl up, so as to bear no slight resemblance to the arms and legs of a monkey, the calyx forming the head. The species is one of the early kinds, and the flowers appear in May.

4.—THE LIZARD ORCHIS. (*ORCHIS HIRCINA*, *Scop.*)

SYNONYME.—*Satyrium hircinum*, *Lin.*

ENGRAVINGS.—Eng. Bot., t. 24; 2nd ed., t. 1199; and our *fig. 4*, in Pl. 56.

SPECIFIC CHARACTER.—Knobs of the root globose. Lip downy, in three linear segments; the middle one very long, twisted, and notched at the end. Sepals converging. (*Lindl.*)

DESCRIPTION, &c.—This is the largest of all the British species of *Orchis*, as it occasionally grows three feet high, and produces sixty or seventy flowers on a spike, flowering from May till August. It was formerly found growing in great abundance in thickets in the chalky soils of Kent and Surrey, but it is now rarely to be met there. The flower is exceedingly curious, and closely resembles a lizard. The labellum is cut into three lobes, the centre one, which is very long, representing the tail of the animal, the centre of the upper part, which is speckled, its back, and the short side lobes its fore legs; the head appearing buried in the calyx of the flower. The specific name of *hircina*, which signifies a goat, alludes to the disagreeable smell of the flower.

5.—THE MARSH ORCHIS. (*ORCHIS LATIFOLIA, Lin.*)SYNONYME.—*O. laxiflora, E. B.*ENGRAVINGS.—Eng. Bot., t. 2308, and Supp., t. 2828; 2nd ed., t. 1200 and 1199*; and our *fig. 2*, in Pl. 56.SPECIFIC CHARACTER.—Knobs imperfectly palmate. Lip convex, crenate, slightly three-cleft; spur conical. Bracteas longer than the flowers. Stem hollow. (*Smith.*)

DESCRIPTION, &c.—This species is exceedingly ornamental, particularly in its flowers. The flowers, which are large, and generally of a deep red, appear from May to July; but vary both in the time of flowering and in the colour of the flowers, according to the soil and situation in which the plant grows. It grows, however, most vigorously on a marshy soil, and the flowers are of a finer colour.

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THE DWARF ORCHIS. (*O. USTULATA, Lin.*)

This is a little plant, seldom more than four or five inches high, which looks as though it had been suddenly stunted in its growth, and had never properly developed itself. The botanic name, ustulata, which signifies scorched, expresses exactly the appearance of the plant; which looks shrunk up, as though it had withered before it had fully expanded. It is generally found on dry, open, chalky downs, where it flowers in June.

THE GREAT BROWN-WINGED ORCHIS. (*O. FUSCA, Jacq.*)

The flowers of this curious and beautiful plant look like a number of fancifully dressed up dolls hung about the spike. The species is common in the woods and on the chalk hills of Kent, but it is rare in other parts of Great Britain. It is a tall robust plant, flowering in May.

THE MILITARY ORCHIS. (*O. MILITARIS, Lin.*)

It seems difficult to discover why this plant is called the Military Orchis, as there is nothing of a soldier-like character about it. The flowers, which appear in May, are of a reddish purple, the centre of the lip being white, with lines of dark raised spots along the segments.

THE SPOTTED ORCHIS. (*O. MACULATA, Lin.*)

This plant is sometimes called the Palmate Orchis, on account of its tubers, which resemble those of the Ranunculus; or, in other words, look like a bundle of small carrots tied together. The flowers, which are pinkish, appear in June and July; and both the flowers and leaves are spotted all over with rather small spots. This species is common in most parts of Great Britain, growing in moist places on heaths and in meadows.

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GENUS VIII.THE PYRAMIDAL ORCHIS. (*ANACAMPTIS, Rich.*)~~~~~
*Lin. Syst. GYNANDRIA MONANDRIA.*GENERIC CHARACTER.—Sepals and petals ringent, coloured; lip lobed, with two projecting plates along its middle, spurred at the base. Pollen masses with one gland, inclosed in a pouch. (*Lindl.*)

DESCRIPTION, &c.—There is only one British species in this genus, namely, the common Pyramidal Orchis (*A. pyramidalis, Rich.*). It is generally found in meadows on a chalky soil; the flowers are large and of a dark rose colour, and the leaves are glossy and without spots. The flowers are densely crowded together on the spike in a pyramidal form, and hence the specific name of the plant. The generic name of *Anacamptis* signifies to bend back, in allusion to the position of the pollen masses.

GENUS IX.

THE FRAGRANT ORCHIS. (GYMNADENIA, *R. Br.*)*Lin. Syst.* GYNANDRIA MONANDRIA.

GENERIC CHARACTER.—Sepals and petals converging, coloured; lip coloured, lobed, spurred. Lobes of the anther parallel. Pollen-masses with two naked glands. (*Lindl.*)

DESCRIPTION, &c.—There is only one British species in this genus, (viz., *G. conopsea*, *R. Br.*.) which though its popular name is the Fragrant Orchis, has yet not by any means an agreeable fragrance in a room, to those who are not accustomed to it. In the open air, however, it smells like new hay. The flowers are purple, and though small, they are pretty. The tubers are palmate. The name of *Gymnadenia* is from two Greek words signifying a naked gland.

GENUS X.

THE BUTTERFLY-ORCHIS. (PLATANTHERA, *Rich.*)*Lin. Syst.* GYNANDRIA MONANDRIA.

GENERIC CHARACTER.—Flowers of Orchis. Spur slender. Glands of the pollen-masses naked; cells of the anther diverging. (*Lindl.*)

DESCRIPTION, &c.—The Common Butterfly Orchis has very pretty white flowers, which bear a slight resemblance to a butterfly, and which appear in June; there is a variety with smaller flowers. The name of *Platanthera* signifies broad anther, from the cells of the anthers spreading.

GENUS XI.

THE FROG-ORCHIS. (PERISTYLUS, *Blume.*)*Lin. Syst.* GYNANDRIA MONANDRIA.

GENERIC CHARACTER.—Flowers of *Platanthera*. Spur very short, usually inflated. Glands of the pollen-masses naked; cells of the anther parallel or diverging. (*Lindl.*)

DESCRIPTION, &c.—There are only two species, both of which are neither very ornamental nor very curious. The name of *Peristylus* is derived from two Greek words signifying around the style.

GENUS XII.

THE MAN-ORCHIS. (ACERAS, *R. Br.*)*Lin. Syst.* GYNANDRIA MONANDRIA.

GENERIC CHARACTER.—Sepals and petals helmet-shaped, herbaceous; lip coloured, lobed, hanging down, not spurred. Pollen-masses with two glands inclosed in a common pouch. (*Lindl.*)

DESCRIPTION, &c.—There is only one species in this genus: the name of *Aceras* signifies having no horn, in allusion to the lip being without a spur.

1.—THE GREEN MAN-ORCHIS. (*ACERAS ANTHROPOPHORA, R. Br.*)SYNONYME.—*Ophrys anthropophora, Lin.*ENGRAVINGS.—Eng. Bot., t. 29; 2nd ed., t. 1206; and our *fig. 1*, in Pl. 57.SPECIFIC CHARACTER.—Lip longer than the ovary. (*Lindl.*)

DESCRIPTION, &c.—The flowers of this curious plant look just like a number of little men dressed in yellow, with green caps on. The species is common in dry chalky soils in the south-east of England, and it generally grows in open situations. The flowers appear in June, and when they have been expanded for some time, and are beginning to wither, the segments of the lip become dark at the extremities, which gives the flower a still more ludicrous resemblance to the figure of a little man.

GENUS XIII.

THE OPHRYS, OR INSECT-BEARING ORCHIS. (*OPHRYS, Lin.*)*Lin. Syst. GYNANDRIA MONANDRIA.*

GENERIC CHARACTER.—Sepals spreading, coloured or herbaceous. Petals much smaller than the sepals, generally coloured; lip convex, not spurred, more or less lobed, usually hairy and figured. Pollen-masses with two glands, each inclosed in a separate pouch. (*Lindl.*)

DESCRIPTION, &c.—All the British species belonging to this genus appear as if an insect were hiding in the centre of the flower. The name of *Ophrys* signifies an eyebrow, and alludes to the fringe of inner sepals, which is conspicuous in most of the flowers.

1.—THE FLY ORCHIS. (*OPHRYS MUSCIFERA, Hudson.*)SYNONYME.—*O. myodes, Swz.*

ENGRAVINGS.—Eng. Bot., t. 64; 2nd ed., t. 1208; and our *fig. 2*, in Pl. 57.

SPECIFIC CHARACTER.—Lip twice as long as the calyx, flat, with four expanded lobes, somewhat downy; the disk polished. Petals linear, smooth. (*Lindley.*)

DESCRIPTION, &c.—It is scarcely possible not to fancy that a fly has settled on each flower, when this plant is seen for the first time, so perfectly is the appearance of an insect imitated. Even the antennæ of the fly are represented by two slender side petals. The flowers appear in May and June, and the plant is generally found only on chalky soils.

2.—THE BEE ORCHIS. (*OPHRYS APIFERA, Huds.*)

ENGRAVINGS.—Eng. Bot., t. 333; 2nd ed., t. 1208; and our *fig. 2*, in Pl. 57.

SPECIFIC CHARACTER.—Lip the length of the calyx, tumid, with

five reflexed marginal lobes; the terminal one awl-shaped, the rest hairy above. Sepals coloured. Petals ciliated.

DESCRIPTION, &c.—The flowers present the appearance of humming-bees clustering round the stalk. The species is found in nearly all the chalky districts of England, and the flowers appear in June and July. The tubers at the base of the stem are nearly round.

3.—THE SPIDER ORCHIS. (*OPHRYS ARANIFERA, Huds.*)SYNONYME.—*O. fucifera, Curtis.*

ENGRAVINGS.—Eng. Bot., t. 65; 2nd ed., t. 1209; and our *fig. 3*, in Pl. 57.

SPECIFIC CHARACTER.—Lip the length of the calyx, tumid, hairy, rounded, emarginate, with four shallow, reflexed, marginal lobes. Sepals herbaceous. Petals linear, smooth. (*Lindley.*)

DESCRIPTION, &c.—This species is found in similar situations to the last, but it flowers earlier in the spring, generally in the month of April. The resemblance of the flower to a spider is not quite so striking as those of



1. Man Orchis 2. Bee Orchis. 3. Spider Orchis. 4. Fly Orchis.
5. Lady's Slipper.

the other species that have been described to the insects they are named from, but still the flowers are very curious. The middle lobe of the lip, which is of a dark brown, is marked with lines of a much paler colour, which look somewhat like the letter w.

THE DRONE ORCHIS. (*O. FUCIFERA, Smith.*)

This is sometimes supposed to be a variety of the last species, but it is very inferior in beauty, and it flowers above a month later.

THE COBWEB ORCHIS. (*O. ARACHNITES, Willd.*)

This has been supposed to be a hybrid between *O. apifera* and *O. fucifera*, but it bears more resemblance to the latter of these species. It is found in chalky soils, like the other kinds, but it does not flower till July.

GENUS XIV.

THE MUSK-ORCHIS. (*HERMINIUM, R. Br.*)

Lin. Syst. GYNANDRIA MONANDRIA.

GENERIC CHARACTER.—Sepals and petals herbaceous, spreading; lip short, lobed, not spurred. Lobes of the anther parallel. Pollen-masses with two naked glands. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species in this genus, viz., the Green Musk-orchis (*H. monorchis, R. Br.*), and its flowers are not ornamental.

GENUS XV.

THE BOG-ORCHIS. (*MALAXIS, Lin.*)

Lin. Syst. GYNANDRIA MONANDRIA.

GENERIC CHARACTER.—Sepals herbaceous, ovate, spreading. Petals herbaceous, reflexed; lip uppermost, much smaller than the sepals, and similar in size and figure to the petals. Column very short. Pollen-masses, four. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species in the genus; an insignificant little plant, growing in spongy turf bogs. *Malaxis* is derived from the Greek word for soft.

GENUS XVI.

THE LIPARIS. (*LIPARIS, Rich.*)

Lin. Syst. GYNANDRIA MONANDRIA.

GENERIC CHARACTER.—Sepals more or less herbaceous, spreading. Petals linear, spreading; lip undermost, dilated, much larger than the sepals. Column nearly as long as the sepals. Pollen-masses four. (*Lindley.*)

DESCRIPTION, &c.—The two-leaved Bog-orehis (*Liparis Loeseli, Rich.*), is a simple little plant, with greenish flowers, which appear in July. It is generally found in sandy bogs, growing among rushes. The name of *Liparis* signifies unctuous, and alludes to the feel of the leaves.

GENUS XVII.

THE LADY'S SLIPPER. (CYPRIPEDIUM, *Lin.*)*Lin. Syst. GYNANDRIA DIANDRIA.*

GENERIC CHARACTER.—Lip inflated, sometimes saccate. Column terminated at the back by a petaloid lobe representing a barren stamen, and dividing the anthers. The two anterior sepals often united. (*R. Br.*)

DESCRIPTION, &c.—There is only one British species in this genus. The name of Cypripedium is compounded of two Greek words, and signifies, literally, Venus's Slipper.

1.—THE COMMON LADY'S SLIPPER. (CYPRIPEDIUM CALCEOLUS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1; 2nd ed., t. 1224; and our *fig. 5*, in Pl. 57.

SPECIFIC CHARACTER.—Stem leafy. Appendage to the column elliptical, obtuse, channelled.

Lip somewhat compressed, shorter than the petals. (*Smith.*)

DESCRIPTION, &c.—This beautiful plant, though rare in England, is yet a true native; and it is found in mountainous woods and thickets in the north of England. It flowers in June, and like all the orchideous plants, it is a perennial; it differs, however, from most of the other British kinds in being without tubers at the base of the stem, and in its flowers being solitary.

CHAPTER LXXV.

THE MELANTHUS FAMILY. (MELANTHACEÆ, *R. Br.*)

CHARACTER OF THE ORDER.—Perianthium inferior, petaloid, in six pieces, or, in consequence of the cohesion of their claws, tubular; the pieces generally involute in aestivation. Stamens six. Anthers mostly turned outwards. Ovarium three-celled, many-seeded. Style trifid or three-parted. Stigmas undivided. Capsule generally divisible into three pieces; sometimes with a loculicidal dehiscence. Seeds with a membranous testa. Albumen dense, fleshy. (*R. Br.*)

DESCRIPTION, &c.—The plants belonging to this order have all leaves sheathing at the base, with parallel veins, and some of them are bulbous, though others have only fibrous roots without bulbs. There is only one ornamental genus of British plants included in this order, namely the Colchicum; the other British plant, the Scotch Asphodel (*Tolfieldia palustris*, Huds.), being a little insignificant plant, entirely without beauty.

GENUS I.

THE COLCHICUM, OR MEADOW-SAFFRON. (COLCHICUM, *Lin.*)*Lin. Syst. HEXANDRIA TRIGYNYIA.*

GENERIC CHARACTER.—Perianthium tubular, long, with a campanulate six-parted limb. Stamens inserted in the orifice of the tube. Anthers oblong, versatile. Ovary one. Styles three, very long. Follicles three, inflated, erect, united at the base, many-seeded. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species. The name of Colchicum is derived from Colchis, near which city the species was found that was first described.



1 Meadow Saffron. 2 White Meadow Saffron. 3 Primrose. 4 Paffodil. 5 Snowdrop.

1.—THE AUTUMNAL MEADOW SAFFRON. (*COLCHICUM AUTUMNALE*, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 133; 2nd ed., t. 535; and our *figs.* 1 and 2, in Pl. 58.SPECIFIC CHARACTER.—Leaves flat, lanceolate, erect. Segments of the corolla oblong. (*Smith.*)

DESCRIPTION, &c.—This species is common in rich moist meadows in various parts of England. It flowers in September, the flowers appearing before the leaves, as in the Autumn-flowering Crocus. The Colchicum is poisonous, if eaten in a fresh state; but it is useful in medicines in allaying the pain of gout and rheumatism, and it is the basis of the celebrated medicine for the gout called *l'eau medicinale*. The part used in medicine is the solid bulb, or corm, as it is properly called. There is a variety of this species, which has only been found near Devizes, in Wiltshire, and which bears its flowers with its leaves in April and May. The flower of this plant is of a pale greenish white, and the perianth is cut into very long narrow segments. (See our *fig.* 2, in Plate 58.)

CHAPTER LXXVI.

THE AMARYLLIS FAMILY. (AMARYLLIDÆ, *R. Br.*)

CHARACTER OF THE ORDER.—Perianthium superior, in six parts, regular, with an imbricated aestivation; the three sepals overlapping the petals. Stamens six, inserted on the segments of the perianthium; filaments sometimes connate at the base; the anthers turned inwards. Ovary three-celled, either many-seeded or few-seeded; in the latter

ease the ovules ascending. Style one. Stigma with three lobes. Fruit three-celled, either capsular, with three loculicidal valves and many seeds; or succulent, with from one to three seeds. Seeds neither black nor crustaceous; the testa often extremely fleshy. Albumen fleshy. Embryo straight, entire, pointing to the hilum. (*Lindley.*)

DESCRIPTION, &c.—The roots of the plants belonging to this order are generally bulbous; the flowers are very ornamental; and the leaves have minute parallel veins. Only three of the genera contain British plants, and they are all placed in the Linnaean class Hexandria, and order Monogynia, from their six stamens and single styles.

GENUS I.

THE SNOWDROP. (*GALANTHUS*, *Lin.*)*Lin. Syst. HEXANDRIA MONOGYNIA.*

GENERIC CHARACTER.—Perianthium in six pieces; the petals twice as short as the sepals, and emarginate. Stigma simple.

DESCRIPTION, &c.—There is one British species. The name of Galanthus signifies, literally, milk flower, in allusion to the beautiful whiteness of the Snowdrop.

1.—THE COMMON SNOWDROP. (*GALANTHUS NIVALIS*, *Lin.*)ENGRAVINGS.—Eng. Bot., t. 19; 2nd ed., t. 466; and our *fig.* 5, in Pl. 58.SPECIFIC CHARACTER.—Leaves not plaited. (*Lindley.*)

DESCRIPTION, &c.—Nothing can be more beautiful than the Snowdrop when it first makes its appearance; its drooping flowers, their delicate whiteness, and the early period at which they are seen, contribute to make this simple little plant a general favourite, and to give it the preference over many of its more showy and brilliant

rivals. Many poets have celebrated it, but perhaps the most beautiful lines that it has inspired are those of Mrs. Robinson :—

“ The snow-drop—winter’s timid child,
Awakes to life, bedewed with tears,
And flings around its fragrance mild ;
And where no rival flow’rets bloom
Amidst the bare and chilling gloom,
A heauteous gem appears.

“ All weak and wan, with head inclined,
Its parent breast the drifted snow,
It trembles while the ruthless wind
Bends its slim form ; the tempest lowers,
Its emerald eye droops crystal showers
On its cold bed below.”

The Wild Snowdrop, with its single flowers, is much more elegant than the Snowdrop of the gardens, the flowers of which are generally double. The blossoms generally open in February, but this year (1846) I gathered snowdrops in our little garden at Bayswater the 16th of January, and on the 1st my daughter gathered a very pretty nosegay of snowdrops and crocuses, with a few flowers of Hepaticia.

GENUS II.

THE SNOWFLAKE. (LEUCOJUM, *Lin.*)

Lin. Syst. HEXANDRIA MONOGYNIA.

GENERIC CHARACTER.—Perianthium with a short tube, and a campanulate, equal limb, formed of six pieces, which are thickest at the apex.
Stigma simple. (*Lindley.*)

DESCRIPTION, &c.—Only the summer Snowflake (*L. aestivum*, *Lin.*,) is a native of Great Britain. It has a very elegant flower, looking like a large Snowdrop, but growing on a very long stem. The name of Leueojum is taken from two Greek words, which signify a white violet.

GENUS III.

THE NARCISSUS. (NARCISSUS, *Lin.*)

Lin. Syst. HEXANDRIA MONOGYNIA.

GENERIC CHARACTER.—Perianthium funnel-shaped, with a spreading, six-parted limb, surrounded at the orifice of the tube by a cup. Stameus six, inserted in the tube, and concealed within the cup. (*Lindley.*)

DESCRIPTION, &c.—The genus Narcissus is a very extensive one, but only three of the species are natives of Great Britain. The name of Narcissus, according to some botanists, is derived from a Greek word, signifying stupor, in allusion to the heavy smell of the Jonquil and other sweet-scented species. The story of Narcissus is well known ; and the unfortunate youth who fell in love with himself is well imaged by these plants, which by a fanciful imagination may be easily supposed to be looking down at, and admiring themselves.

1.—THE POET’S NARCISSUS. (NARCISSUS POETICUS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 275 ; 2nd ed., t. 469.

SPECIFIC CHARACTER.—Flowers mostly solitary. Crown very short, | depressed ; membranous and erucate at the margin. Leaves bluntly | keeled, their edges reflexed. (*Lindley.*)

DESCRIPTION, &c.—This very elegant plant is called the Narcissus of the poets, because it is feigned to be the plant into which the unfortunate Narcissus was changed, and it is certainly one of the most beautiful of all the species. It is by no means common, in a wild state, in England, but it is found occasionally in heathy ground

in open elevated situations, where it flowers in May. It is easily distinguished from the Daffodil by its flower, which is white, except the yellow corona, which has a deep reddish border; and by two flowers frequently growing from the same stem. It has also a delicate fragrance, in which the other British species are deficient.

2.—PRIMROSE PEERLESS. (*NARCISSUS BIFLORUS*, *Curt.*)

SYNONYMES.—*N. poeticus*, *Huds.*; *Pale Narcissus*.

ENGRAVINGS.—Eng. Bot., t. 276; 2nd ed., t. 470; and our *fig. 3*, in Pl. 58.

SPECIFIC CHARACTER.—Flowers in pairs. Crown very short, depressed; membranous, and crenate at the margin; leaves acutely keeled, their edges inflexed.

DESCRIPTION, &c.—The shape of the flowers of this species resembles that of the Poet's Narcissus, but the colour is a pale primrose, except the corona, which is yellow, with a white edge; and two flowers are almost always produced in the same spathe. The scent of these flowers is strong, and not only unpleasant, but actually dangerous, in a close room, as persons have been known to be affected by stupor and violent pains and giddiness in the head from inhaling it. It is found in similar situations to the preceding species, but it flowers a little earlier.

3.—THE DAFFODIL. (*NARCISSUS PSEUDO-NARCISSUS*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 17; 2nd ed., t. 468; and our *fig. 4*, in Pl. 58.

SPECIFIC CHARACTER.—Flowers solitary. Crown bell-shaped, erect,

erippled, with six marginal segments; its length equal to that of the ovate petals.

DESCRIPTION, &c.—Few plants are better known than the common Daffodil, which grows abundantly in moist meadows and shady thickets. Occasionally it is found in open dry situations, but these occasions are comparatively rare. The Daffodil is the earliest of all the British Narcissi, as it produces its flowers in March.

CHAPTER LXXVII.

THE LILY FAMILY. (*LILIACEAE*, *Juss.*)

CHARACTER OF THE ORDER.—Perianthium inferior, in six pieces, coloured, regular; occasionally with a tube. Stamens six, inserted into the pieces of the perianthium. Ovary superior, three-celled, many-seeded, with a loculicidal deliquesce. Seeds flat, packed one upon another, in one or two rows, with a spongy, dilated, often winged integument. Embryo with the same direction as the seed, in the axis of fleshy albumen.

DESCRIPTION, &c.—The Lilies have all scaly bulbs; leaves with parallel veins, either lanceolate or cordate, and large flowers, which have generally bright colours. None of the true lilies are natives of Great Britain, and the only British genera contain but two plants; viz., the Fritillary and the wild Tulip.

GENUS I.

THE FRITILLARY. (*FRITILLARIA*, *Lin.*)

Lin. Syst. HEXANDRIA MONOGYNIA.

GENERIC CHARACTER.—Perianthium campanulate, of six pieces, with an oval honey pore at their base. Stigmas, three. Seeds flat. (*Lindley.*)

DESCRIPTION, &c.—Only one species of the genus is a native of Great Britain. The name of Fritillaria is derived from *Fritillus*, a chess-board, in allusion to the chequered petals of the flowers.

1.—THE COMMON FRITILLARY. (*FRITILLARIA MELEAGRIS, Lin.*)

SYNONYMES.—Chequered Daffodil; Snake's Head Lily; Guinea-hen flower.

ENGRAVINGS.—Eng. Bot., t. 622; 2nd ed., t. 471; and our *fig. 2*, in Pl. 59.

SPECIFIC CHARACTER.—All the leaves alternate, linear-lanceolate, pointed. Stem single-flowered. Honey-pore linear. Points of the perianthium inflexed. (*Smith.*)

DESCRIPTION, &c.—The common Fritillary is a modest, dull-coloured, bell-shaped flower, with a drooping head, which has nothing striking in its outward appearance, but which, when examined closely, will be found to be delicately marked with chequers, and to have four drops of water hanging inside its bell. The same peculiarity is found in all the exotic species of Fritillary, and in the Crown Imperial, which was formerly included in this genus. The British species is found abundantly near the Thames and other rivers, particularly where the ground is frequently overflowed; but as it is never very conspicuous, except in the month of April, when it is in flower, it is easily overlooked. It has many popular names, several of which are given in the synomyms; and in some parts of England it is also called the Widow flower.

GENUS II.

THE TULIP. (*TULIPA, Lin.*)

Lin. Syst. HEXANDRIA MONOGYNIA.

GENERIC CHARACTER.—Perianthium campanulate, of six pieces, without honey pores at the base. Stigmas three, thick, sessile. Capsule oblong, three-cornered. Seeds flat. (*Lindley.*)

DESCRIPTION, &c.—Only one species is British. The genus is called *Tulipa* from its Persian name.

1.—THE WILD TULIP. (*TULIPA SYLVESTRIS, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 63; 2nd edit., t. 472; and our *fig. 1*, in Pl. 58.

SPECIFIC CHARACTER.—Flowers solitary, a little drooping. Leaves lanceolate. Stigmas triangular, abrupt. Stameus hairy at the base. (*Smith.*)

DESCRIPTION, &c.—The wild Tulip of England and France is very different from the unbroken Tulips or breeders of the gardens, which are all, or nearly so, descended from tulips brought originally from Italy or the Levant, and are of a dull reddish-purple before they become beautifully variegated. The British wild Tulip, on the contrary, is yellow, and though it becomes double by cultivation, is seldom variegated, unless the Parrot tulips spring from *T. sylvestris*. The wild Tulip is generally found growing in chalk pits, where it flowers in the month of April. This species has a very small bulb; and it increases by throwing out fibres from the root, at the extremity of which small bulbs become formed.

CHAPTER LXXVIII.

THE ASPHODEL FAMILY. (*ASPHODELEÆ, R. Br.*)

CHARACTER OF THE ORDER.—Calyx and corolla forming a six-parted, or six-cleft, petaloid, regular perianthium. Stamens six, inserted upon the perianthium, or hypogynous; the three opposite the sepals sometimes either unlike the rest, or wanting. Ovarium superior, three-celled, with two or many seeded cells; ovules, when two, ascending.

Stylo one. Stigma entire, or with three short lobes. Fruit mostly a three-celled, three-valved capsule, with a loculicidal dehiscence; occasionally succulent, and sometimes three-parted. Seeds with a testa, which is black, brittle, and crustaceous; albumen fleshy, embryo included.

DESCRIPTION, &c.—There are eleven genera of British plants in this order, but one of them, viz., the



1 The Wild Tulip 2 The Fritillary 3 The Star of Bethlehem.
4 Ramsons or Broad leaved Garlic 5 Yellow Gagea.

Asparagus, cannot be said to contain any ornamental flowers, and I shall therefore omit it. The others are nearly all herbaceous plants, with bulbous or fascicled roots.

GENUS I.

THE GARLIC. (ALLIUM, *Lin.*)

Lin. Syst. HEXANDRIA MONOGYNIA.

GENERIC CHARACTER.—Perianthium six-parted, spreading. Stigma simple. Capsule three angular; the cells deeply parted in two, separating from a permanent filiform axis. Flowers in terminal umbels, with two herbaceous bractæ.

DESCRIPTION, &c.—The British species of Garlic are neither very numerous nor very ornamental, when compared with those of other countries; and only two or three kinds have pretty flowers. The name of Allium is said to be derived from the Celtic word for hot or pungent, in allusion to the strong flavour of Garlic. The following are the most ornamental species.

1.—THE SAND GARLIC. (ALLIUM ARENARIUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1358; 2nd ed., t. 474.

SPECIFIC CHARACTER.—Umbel globose, bearing bulbs. Stem leafy below. Leaves flat, with cylindrical sheaths. Bractæ obtuse. Three

alternato stamens dilated, three-cleft. Keel of the petals roughish.

(*Smith.*)

DESCRIPTION, &c.—A very pretty plant, with a small close umbel of rose-coloured flowers, amongst which a number of small bulbs are formed, which fall in autumn and take root in the ground. In this manner the plant is generally propagated, as it seldom ripens its seeds. It is found in mountainous places in the north of England and Scotland, and on the sands of Portmarnock, in Ireland. It flowers in July.

2.—BROAD-LEAVED GARLIC, OR RANSOMS. (ALLIUM URSINUM, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 122; 2nd ed., t. 478; and our *fig.* 4, in Pl. 59.

SPECIFIC CHARACTER.—Stalk naked, semicylindrical. Leaves elliptic—lanceolate, stalked. Umbel level-topped. Stamens simple. (*Smith.*)

DESCRIPTION, &c.—This is the most common plant in the genus, and its white flowers may be seen in the months of May and June, growing in abundance in meadows, hedges, and woods, wherever the soil is sufficiently moist. Notwithstanding its beauty, however, it is generally thrown away as soon as it is gathered, on account of its strong and very disagreeable smell, and it even gives the taste of garlic to the milk of the cows which eat of it.

3.—CHIVES. (ALLIUM SCHENOPRASUM, *Lin.*)

ENGRAVINGS.—Eng. Bot. t. 2441; 2nd ed., t. 479.

SPECIFIC CHARACTER.—Stalk naked, round, the height of the foliage. Leaves cylindrical, somewhat tapering at the point. Stamens simple. (*Smith.*)

DESCRIPTION, &c.—Chives are well known from the use made of their bulbous part in domestic purposes, not only in cookery, but in feeding young turkeys and pea-fowl. The flowers are ornamental, and of a bluish purple, disposed in a small close head; they appear in June.

THE GREAT ROUND-HEADED GARLIC. (A. AMPELOPRASUM, *Lin.*)

This species is only found wild on an island in the Severn. Its flowers, which appear in August, resemble those of the Leek, and possess no beauty.

THE MOUNTAIN GARLIC. (*A. CONIATUM, Lin.*)

This plant possesses no beauty, but it has very little of the Garlic smell.

WILD GARLIC, OR STREAKED FIELD GARLIC. (*A. OLERACEUM, Lin.*)

A plant of no beauty, but common on pieces of waste ground throughout Great Britain. It is supposed to be the original of the cultivated Garlic.

CROW GARLIC. (*A. VINCALE, Lin.*)

Still more abundant than the last, this species possesses no beauty, but it is curious, partly from the great quantity of bulbs which it produces among the flowers, and partly because in the flowers themselves the stamens project far beyond the perianthium.

GENUS II.

THE GAGEA. (*GAGEA, Salisb.*)

Lin. Syst. HEXANDRIA MONOGYNIA.

GENERIC CHARACTER.—Perianthium somewhat herbaceous, six-parted, persistent, converging at the base, spreading at the apex. Stamens six; filaments not dilated at the base. Stigma gaping. Capsule three-cornered.—Flowers yellow, corymbose, with leafy bractæ. (*Lindley.*)

DESCRIPTION, &c.—There is only one species in this genus, which has been separated from *Ornithogalum* on account of the structure of the stamens. The name of *Gagea* was given in honour of Sir Thomas Gage, a botanical amateur.

1.—THE YELLOW GAGEA. (*GAGEA LUTEA, Ker.*)

SYNONYMES.—*Ornithogalum luteum, Lin.*; Yellow Star of Bethlehem.

ENGRAVINGS.—Eng. Bot., t. 21; 2nd ed., t. 480; and our *fig. 5*, in Pl. 59.

SPECIFIC CHARACTER.—Radical leaves one or two, linear, much longer than the angular leafless scape. Pedicels solitary, shorter than the taper-pointed bractæ. Segments of the perianth lanceolate, obtuse. (*Lindley.*)

DESCRIPTION, &c.—A pretty little bulbous plant, with greenish yellow flowers, not very common, but met with in various parts of England and the lowlands of Scotland, where the soil is at once moist and sandy. It flowers in March and April.

GENUS III.

THE STAR OF BETHLEHEM. (*ORNITHOGALUM, Lin.*)

Lin. Syst. HEXANDRIA MONOGYNIA.

GENERIC CHARACTER.—Perianthium petaloid, six-parted, withering upon the stalk, converging at the base, diverging at the apex. Stamens six, the three outer with dilated filaments. Stigma small, capitate.

Ovary bluntly three-cornered. Flowers racemose, white, green, or yellow, with membranous bractæ. (*Lindley.*)

DESCRIPTION, &c.—There are several British species of *Ornithogalum*, all of which are more or less ornamental. The name of *Ornithogalum* signifies Bird's-milk.

1.—THE COMMON STAR OF BETHLEHEM. (*ORNITHOGALUM UMBELLATUM, Lin.*)

ENGRAVINGS.—Eng. Bot., t. 130; 2nd ed., t. 482; and our *fig. 3*, in Pl. 59.

SPECIFIC CHARACTER.—Flowers corymbose; their partial stalks overtopping the main one. Filaments dilated, tapering, entire. (*Smith.*)

DESCRIPTION, &c.—This very pretty plant is only a doubtful native; but it is found occasionally in woods

and on hedge-banks, to which places it has probably migrated from gardens. The bulbs are eatable when boiled. The flowers appear in April and May, but they only expand when the sun shines.

PRUSSIAN ASPARAGUS, OR THE SPIKED STAR OF BETHLEHEM. (*O. PYRENAICUM, Lin.*)

This species grows abundantly in the neighbourhood of Bath, and the flower-stalk, before the flowers have expanded, is sold in the market-place of that city as a kind of Asparagus, and is very good to eat. It is also found occasionally in Sussex and Bedfordshire, but it is far from being common. It flowers in June and July. The flowers are smaller and less ornamental than those of the other species, and they are arranged pyramidal on a flower-scape, from one foot to two feet high.

THE DROOPING STAR OF BETHLEHEM. (*O. NUTANS, Lin.*)

This is the largest-flowered of the British species, but it is the most rare. It flowers in April and May.

GENUS IV.

THE MOUNTAIN SPIDER-WORT. (*ANTHERICUM, Lin.*)

Lin. Syst. HEXANDRIA MONOGYNIA.

GENERIC CHARACTER.—Perianthium six-parted, petaloid, equal, spreading, deciduous. Stamens six. Filaments bearded. Anthers versatile. Ovary polyspermous. Style filiform. Capsule roundish, three-celled, with three valves bearing the dissepiments in the middle. Seeds few, angular, naked at the hilum. (*R. Br.*)

DESCRIPTION, &c.—Only one species of this genus is a native of Britain, and as it is only found on the highest parts of Snowdon, it is not very likely to be met with by any of my readers. It is a little insignificant plant, which produces its whitish flowers in June. The word *Anterium* signifies Hedge-flower, a name quite inappropriate to the only British species.

GENUS V.

THE SQUILL. (*SCILLA, Lin.*)

Lin. Syst. HEXANDRIA MONOGYNIA.

GENERIC CHARACTER.—Perianthium six-parted, generally spreading and deciduous. Filaments filiform, smooth, inserted into the base of the perianthium. Seeds roundish. Roots bulbous. (*Duby.*)

DESCRIPTION, &c.—These beautiful little plants are found abundantly in different parts of England, but they often escape notice, from their dwarf stature, and the resemblance of their leaves to grass. The name of *Scilla* is said to be derived from a Greek word, signifying to injure, from the roots being supposed to be poisonous. *S. verna* is, perhaps, the most common, but *S. autumnalis* is also found very frequently. *S. bifolia* is the most rare, and it is probably not a true native.

GENUS VI.

THE GRAPE HYACINTH. (*MUSCARI, Tourn.*)

Lin. Syst. HEXANDRIA MONOGYNIA.

GENERIC CHARACTER.—Perianthium ovate, inflated, six-toothed. Capsule three-cornered, with prominent angles. Cells two-seeded.

DESCRIPTION, &c.—The Starch Hyacinth (*M. racemosum*, Mill.), is the only species of this genus that has

been found wild in Great Britain, and that is not a true native. The plant takes its English name from the flowers smelling like starch, and they appear in May. *Muscari* alludes to the musk-like smell of some of the exotic species.

GENUS VII.

THE HYACINTH. (HYACINTHUS, *Lin.*)

Lin. Syst. HEXANDRIA MONOGYNIA.

GENERIC CHARACTER.—Perianthium six-cleft, tubular; segments spreading at the apex. Stamens inserted about the middle of the perianthium. Capsule obtusely three-cornered. Cells many-seeded. (*Lindley.*)

DESCRIPTION, &c.—The common Harebells, or Wild Hyacinth (*H. nonscriptus*, *Lin.*), is the only British species of the genus, but it is common on hedge-banks and in thickets in every part of Great Britain.

GENUS VIII.

THE CONVALLARIA. (CONVALLARIA, *Lin.*)

Lin. Syst. HEXANDRIA MONOGYNIA.

GENERIC CHARACTER.—Sepals and petals united in a perianthium, which is either globose or cylindric, and six-toothed. Stamens six. Berry round, before maturity spotted, three-celled, with one-seeded cells. (*Lindley.*)

DESCRIPTION, &c.—This genus was formerly placed in the natural order *Smilicinea*, but Dr. Lindley places it with the Hyacinth and other well-known bulbs in *Asphodeleæ*. The name of the genus is derived from *Convallis*, a valley, in allusion to the situation in which the species are generally found.

1.—THE LILY OF THE VALLEY. (CONVALLARIA MAJALIS, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 1035; 2nd ed., t. 491; and our fig. 2, in Pl. 60.

SPECIFIC CHARACTER.—Flower-stalk radical, naked, semi-cylindri-

cal. Cluster simple. Flowers drooping, cup-shaped, with rather distinct segments. (*Smith.*)

DESCRIPTION, &c.—This beautiful and delightfully fragrant flower is common in woods in almost every part of Great Britain, though it is most abundant in rocky situations, and it seldom produces its large crimson berries in any other places. It however generally spreads rapidly, from its creeping roots, and it flowers in a wild state, in May. The following pretty lines, addressed to this flower, were written, I believe, by a young surgeon residing at Godalming, but they appeared anonymously in the *Field Naturalists' Magazine*, for 1833.

“Fair flower that, lapped in lowly glade,
Dost hide beneath the green-wood shade;
Than whom the vernal gale
None fairer wakes on bank or spray;
Our England's Lily of the May,
Our Lily of the vale.

“Art thou that ‘Lily of the field’
Which, when the Saviour sought to shield
The heart from black despair,
He showed to our mistrustful kind,
An emblem to the thoughtful mind,
Of God's paternal care?

“What though no care nor art be thine,
Tho' loom to ply, the thread to twine?
Yet, born to bloom and fade;
Thou too a lovelier robe arrays
Than e'er, in Israel's brightest days,
Her wealthiest king arrayed;

“Of thy twin leaves th' embowered screen,
Which wraps thee in thy shroud of green,
Thy Eden-breathing smell;
Thy arched and purple-vested stem,
Whence pendant many a pearly gem,
Displays a milk-white bell.

“ Instinct with life thy fibrous root,
Which sends from earth th’ ascending shoot,
As rising from the dead,
And fills thy veins with verdant juice,
Charged thy fair blossoms to produce,
And berries scarlet red.

“ Who forms thee thus with unseen hand ;
Who at creation gave command,
And will’d thee thus to be ;
And keeps thee still in being, through
Age after age revolving, who
But the Great God is He ?

“ Yes ! He who made and fosters thee,
In Reason’s eye perforee must be
Of majesty divine :
Nor deems she that his guardian care
Will He in man’s support forbear,
Who thus provides for thine.”

2.—SOLOMON’S SEAL. (*Convallaria multiflora*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 279 ; 2nd ed., t. 493 ; and our *fig.* 3, in Pl. 60.

SPECIFIC CHARACTER.—Leaves alternate, clasping the round stem. Stalks axillary, many-flowered. Stamens downy. (*Smith.*)

DESCRIPTION, &c.—This species is common in many parts of England. Its stems rise from a foot to eighteen inches high, and its flowers are white, tipped with green. The berries are blackish. The name of Solomon’s Seal alludes to the root, which, when cut, shows a curious mark, like a Hebrew letter.

THE ANGULAR SOLOMON’S SEAL. (*C. polygonatum*, *Lin.*)

This species bears considerable resemblance to the last, but the flowers are larger, more fragrant, and solitary, or in pairs, and the stem is angular, instead of round. The flowers appear in May and June, and they are succeeded by berries that are quite black. This species is comparatively rare, as it is only found in woods in mountainous situations. The young shoots of both this and the preceding species may be eaten like Asparagus, and their underground stems, which are large and fleshy, are very good to eat when baked.

THE NARROW-LEAVED SOLOMON’S SEAL. (*C. verticillata*, *Lin.*)

The stems of this species are two or three feet high, and naked below, though they are clothed with whorls of leaves in the upper part. The flowers, which are small, appear in June, and the berries are blue.

GENUS IX.

THE BUTCHER’S BROOM. (*Ruscus*, *Lin.*)

Lin. Syst. *DICECIA TRIANDRIA.*

GENERIC CHARACTER.—Sepals three. Petals three, spreading. Filaments united in a tube, which is either with or without anthers. Style one. Stigma one. Berry globose, three-celled, with two-seeded cells. (*Lindley.*)

DESCRIPTION, &c.—The name of *Ruscus* is said to have been derived from two Celtic words, signifying Box Holly.

1.—THE COMMON BUTCHER’S BROOM. (*Ruscus aculeatus*, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 560 ; 2nd ed., t. 1385 ; and our *fig.* 5, in Pl. 60.

SPECIFIC CHARACTER.—Leaves ovate, sharp-pointed, flowering on the upper side without a leaflet. (*Smith.*)

DESCRIPTION, &c.—This very curious plant affords a striking illustration of the theory, which states that

the midrib of the leaf is only a continuation of the stem, for the flowers and berries both spring from the midrib, and hang from the centre of the leaf. The leaves are hard and prickly, and the plant takes its name of Butcher's Broom from the use still made of it by butchers, in many parts of England, to drive the flies from their stalls, by the sharpness and hardness of the leaves. The plant is common in almost every part of England, particularly in gravelly soils, and the flowers appear in March and April.

GENUS X.

THE HERB PARIS. (PARIS, *Lin.*)

Lin. Syst. OCTANDRIA TETRANDRIA.

GENERIC CHARACTER.—Sepals four. Petals four. Stamens eight. Anthers attached to the middle of the filaments. Stigmas four. Berry four-celled; cells eight-seeded.

DESCRIPTION, &c.—The name of Paris is taken from the Latin word *pars*, equal, because all the parts of the plant are in equal numbers.

1.—THE COMMON HERB PARIS. (PARIS QUADRIFOLIA, *Lin.*)

ENGRAVINGS.—Eng. Bot., t. 7; 2nd ed., t. 576; and our *fig.* 4, in Pl. 60.

SPECIFIC CHARACTER.—Leaves ovate; four in a whorl.

DESCRIPTION, &c.—This curious plant, all the parts of which are in fours or twice four, grows in tufts or extensive patches in shady woods in many parts of Great Britain. It is a perennial, and it produces its very singular flowers in May and June. The whole plant is a powerful narcotic, and as such, is poisonous.

THE ORDER DIOSCOREÆ

Only contains one British plant, viz., the Black Bryony (*Tamus communis*, *Lin.*), an elegant twiner, with heart-shaped leaves, and small white flowers, which are succeeded by very handsome scarlet berries. It generally grows in high hedges, or among woods, where it twines its graceful stem from bough to bough, sometimes hanging in festoons, and sometimes waving to and fro in the wind, as though in search of a place on which to fix. The leaves are glossy, and of a very deep green, and the root, which is very large and fleshy, is black on the outside, and so acrid that it was formerly used as a kind of blister. The plant bears a considerable outward resemblance to the White Bryony (*Bryonia dioica*), but botanically it is quite distinct. (See p. 225.)

CHAPTER LXXIX.

THE BUTOMUS FAMILY. (BUTOMEÆ, *Rich.*)

CHARACTER OF THE ORDER.—Sepals three, herbaceous. Petals three, coloured, petaloid. Stamens definite, or indefinite, hypogynous. Ovaries superior, three, six, or more, either distinct, or united into a single mass; stigmas the same number as the ovaries, simple. Follicles many-seeded, either distinct and rostrate, or united in a single mass.

Seeds minute, very numerous, attached to the whole of the inner surface of the fruit; albumen none; embryo with the same direction as the seed. Aquatic plants. Leaves very vascular, often yielding a milky juice, with parallel veins. Flowers in umbels, conspicuous, reddish or yellowish. (*Lindley.*)

DESCRIPTION, &c.—There is only one British species in this order.

GENUS I.

THE FLOWERING RUSH. (BUTOMUS, *Lin.*)*Lin. Syst. ENNEANDRIA HEXAGYNIA.*

GENERIC CHARACTER.—Stamens nine, of which three are internal and petaloid. Ovaries six, with long beaks. Fruit capsular, dehiscing at the inner edge. Seeds linear-oblong, straight, with longitudinal streaks. (*Lindl.*)

DESCRIPTION, &c.—The name of *Butomus* is derived from two Greek words signifying to hurt an ox, because the leaves of the plant are so sharp that cattle are apt to hurt their mouths when they browse upon them.

1.—THE COMMON FLOWERING RUSH. (BUTOMUS UMBELLATUS, *Lin.*)

ENGRAVINGS.—Eng. Bot., 651; 2nd ed., t. 579; and our *fig. 1*, in Pl. 60.

SPECIFIC CHARACTER.—Leaves linear, subulate, trigonous. Scape longer than the leaves. Spathe three-leaved. (*Smith.*)

DESCRIPTION, &c.—This very handsome plant is common in ditches and ponds, where its large showy flowers expand in June and July. The leaves grow two or three feet long, and the flower-stem is longer than the leaves. The flowers vary in colour from crimson to rose-colour and white, but they always form a large, erect, umbel. The plant is a perennial, and the root is white and tuberous.

THE ORDER RESTIACEÆ

Contains only one British plant, viz., the Jointed Pipewort (*Eriocaulon septangulare*, *Withl.*), which is not at all ornamental.

CHAPTER LXXX.

THE RUSH FAMILY. (JUNCÆ, *Dec.*)

CHARACTER OF THE ORDER.—Flowers hermaphrodite or unisexual. Calyx and corolla forming an inferior, six-parted, somewhat glutinous perianthium. Stamens six, inserted into the base of the segments; sometimes three, and then opposite the sepals. Anthers two-celled. Ovarium one or two-celled, one or many-seeded, or one-celled and

three-seeded. Style one. Stigmas generally three, sometimes only one. Fruit capsular, with three valves, which have the dissepiment in their middle, sometimes destitute of valves, and one-seeded by abortion. Seeds with a testa, which is neither black nor crustaceous; albumen firm, fleshy, or cartilaginous; embryo within it. (*R. Br.*)

DESCRIPTION, &c.—There are three genera in this order.

THE RUSHES. (JUNCUS, *Lin.*)

The most ornamental species of this genus is the soft Rush (*J. effusus*, *Lin.*), the stems of which are employed with those of the common Rush (*J. conglomeratus*, *Lin.*) in making chair-bottoms and mats, while the pith is used for rushlights. The Sea Rush, the Jointed Rush, the Toad Rush, and the Moss Rush, or Goose-corn, all belong to the genus *Juncus*. The name of *Juncus* is from the Latin word *Jungo*, to join; because the fibres of some of the species are used in making cordage.

THE HAIRY RUSH. (LUZULA, *Lin.*)

Some of the species of this genus are very pretty, particularly the common Hairy Rush (*L. campestris*, *Willd.*), which has rich dark-brown flowers with large yellow anthers. The name of the genus is taken from the Italian word for glow-worm, *lucciola*; because the anthers, when wet with dew, sparkle by moonlight, and gave the Italians an idea of these brilliant insects.

THE LANCASHIRE BOG ASPHODEL. (NARTHECIUM OSSIFRAGUM, *Lin.*)

This is a very handsome plant, with golden-yellow star-like flowers, resembling some kind of *Iris* rather

than a Rush. It is found abundantly on black turf bogs and mountain moors in every part of Great Britain, and its flowers appear in July and August. The name of Narthecium is derived from a Greek word signifying a rod, in allusion to the elongated straight raceme of flowers.

GLUMACEOUS PLANTS.

These plants, which include only the Sedges and the Grasses, are those which have no regular petals to their flowers, but have instead either bractæ, or a kind of bractæ called glumes.

CHAPTER LXXXI.

THE SEDGE FAMILY. (CYPERACEÆ, Juss.)

CHARACTER OF THE ORDER.—Flowers hermaphrodite, or bisexual, consisting of imbricated solitary bractæ, very rarely inclosing other bractæ called glumes. Stamens hypogynous, definite, one, two, three, four, six, or twelve; anthers fixed by their base, entire, two-celled. Ovary one-seeded, often surrounded by bristles called hypogynous setæ, probably constituting the rudiments of a perianthium; ovulum

erect; style single, trifid or bifid; stigmas undivided, occasionally bifid. Nut crustaceous or bony. Albumen of the same figure as the seed; embryo lenticular, undivided, inclosed within the base of the albumen. Roots fibrous. Stems very often without joints, three-cornered, or taper. Leaves with their sheaths entire. The lowermost bractæ often sterile.

DESCRIPTION, &c.—The Sweet Cypress or English Galingale (*Cyperus longus*, Lin.), and the Cotton Grass (*Eriophorum angustifolium*, Lin.), are the most ornamental plants belonging to this order. The latter, indeed, is very beautiful, and it produces its brilliant white tufts of cotton-like bristles in such abundance as to give the turf bogs on which it is found the appearance of being covered with snow in the midst of summer. The other genera belonging to this order are the Beak Rush (*Rhyncospora*), the Bog Rush (*Schænus*), the Spike Rush (*Heliocharis*), the Club Rushes including the Bull Rush (*Scirpus*), the Twig Rush (*Cladium*), and the Sedges (*Carex*).

CHAPTER LXXXII.

THE GRASS FAMILY. (GRAMINEÆ, Juss.)

CHARACTER OF THE ORDER.—Flowers usually hermaphrodite, sometimes monœcious or polygamous; consisting of imbricated bractæ, of which the exterior are called glumes, those inclosing the stamens paleæ, and the innermost at the base of the ovary, scales. Glumes usually two, alternate; sometimes single, most commonly unequal. Paleæ two, alternate; the lower or exterior simple, without heel; the upper or interior composed of two united by one margin, usually with two heels. Scales two, sometimes wanting, collateral, alternate with the paleæ, and opposite the lower of them, either distinct or united. Stamens hypogynous, one, two, three, four, or six, or more; anthers ver-

satile. Ovary single; styles two, very rarely one or three; stigmas feathery or hairy. Pericarpium usually undistinguishable from the seed, membranous. Albumen farinaceous; embryo lying on one side of the albumen at the base, lenticular, with a broad cotyledon, and a developed plumula, and occasionally, but very rarely, with a second cotyledon on the outside of the plumula, and alternate with the usual cotyledon. Roots fibrous or bulbous. Stems cylindrical, fistular, closed at the joints, covered with a coat of silex. Leaves alternate, with a split sheath. Flowers in spikes, racemes or panicles.

DESCRIPTION, &c.—There are fifty-six genera of Grasses, but only a few can be called ornamental; and of these the most beautiful are the Feather Grass (*Stipa pennata*, Lin.), and the Quaking Grass (*Briza media*, Lin.) The others are scarcely distinguishable from each other by the common eye, though each is curiously and wonderfully formed.

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